C2400-1-U

Alcohol | Aluminum | Antimony | Apples |
Arsenic | Barley | Bauxite | Beer |
Bismuth | Broilers | Burlap &
Butter | Cadmium | Casto
Cattle & Calves | Ceme
Cheese | Chromite | C
Cobalt | Cocoa | Co
Coconut Oil & Co
Copra | Coffee | C
Coke | Copper |
Corn Oil | Cotto
Cottonseed & C
Cottonseed Pro
Currencies | Dis
Distilled Spirits |
Eggs | Electric Po
Fertilizers | Flaxse
& Linseed Oil | Gas |
Glass | Gold | Grain S
Sorghums | Hard Fibers
Hay | Heating Oil | Hides &
Hogs | Honey | Interest Rates |
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COMMODITY YEAR BOOK

1984

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(continued on back flap)

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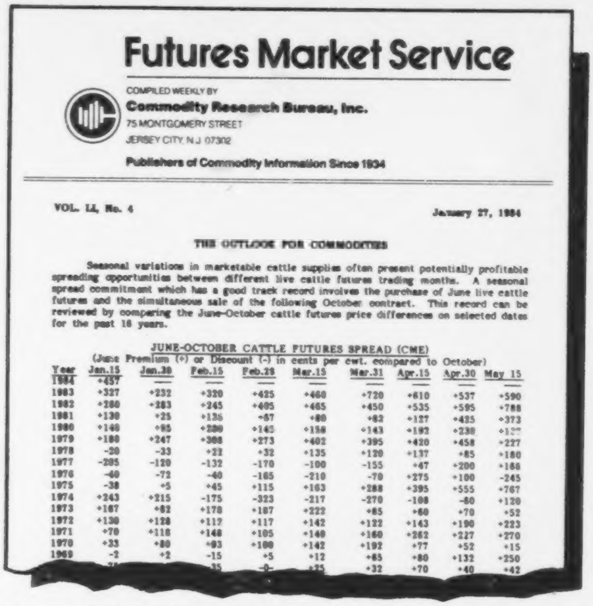

Futures Market Service

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Publishers of Commodity Information Since 1934

VOL. LI, No. 4

January 27, 1984

THE OUTLOOK FOR COMMODITIES

Seasonal variations in marketable cattle supplies often present potentially profitable spreading opportunities between different live cattle futures trading months. A seasonal spread commitment which has a good track record involves the purchase of June live cattle futures and the simultaneous sale of the following October contract. This record can be reviewed by comparing the June-October cattle futures price differences on selected dates for the past 16 years.

JUNE-OCTOBER CATTLE FUTURES SPREAD (CME)
(June Premium (+) or Discount (-) in cents per cwt. compared to October)

Year	Jan.15	Jan.30	Feb.15	Feb.28	Mar.15	Mar.31	Apr.15	Apr.30	May 15
1984	+457	—	—	—	—	—	—	—	—
1983	+327	+232	+320	+425	+460	+720	+610	+537	+590
1982	+280	+283	+245	+405	+465	+450	+535	+595	+788
1981	+130	+25	+135	+67	+80	+82	+127	+425	+373
1980	+140	+95	+200	+145	+158	+143	+192	+238	[illegible]
1979	+180	+247	+308	+273	+402	+395	+420	+458	+227
1978	-20	-33	+22	+32	+135	+120	+137	+85	+180
1977	-205	-120	-132	-170	-100	-155	+47	+200	+168
1976	-40	-72	-40	-165	-210	-70	+275	+100	-245
1975	-38	+5	+45	+115	+163	+288	+395	+555	+767
1974	+243	+215	-175	-323	-217	-270	-108	-80	+120
1973	+167	+82	+178	+187	+222	+85	+60	+70	+52
1972	+130	+128	+117	+117	+142	+122	+143	+190	+223
1971	+70	+118	+148	+105	+140	+160	+262	+227	+270
1970	+33	+80	+93	+100	+142	+192	+77	+52	+15
1969	-2	+2	-15	+5	+12	+65	+80	+132	+250
			-35	-0-	+25	+32	+70	+40	+42

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Futures Markets Analyzed In Every Weekly Issue

- BEEF CATTLE
- COCOA
- COFFEE
- COPPER
- CORN
- COTTON
- CRUDE OIL
- GASOLINE
- GINNIE MAES
- GOLD
- HEATING OIL
- HOGS
- LUMBER
- OATS
- ORANGE JUICE
- PLATINUM
- PLYWOOD
- PORK BELLIES
- SILVER
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- SOYBEAN MEAL
- SOYBEAN OIL
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Four pages each week are divided into separate sections for each active futures market. They are listed on this page. These markets are analyzed separately in each issue.

The final page is reserved for timely statistical and factual data such as open interest, volume, trading facts and a calendar of coming commodity events.

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Cattle (Live)	**Chicago**
Cattle (Feeder)	**Chicago**
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Cocoa	**N.Y., London**
Coffee	**N.Y., London**
Copper	**N.Y., London**
Corn	**Chicago**
Cotton	**New York**
Crude Oil	**New York**
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Gasoil	**London**
Gasoline (Leaded)	**New York**
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Treasury Bonds	**Chicago**
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SECTION I contains approximately 400 statistical tables — updated in each issue — corresponding to the *monthly tables* found in *Commodity Year Book*. Each table shows you the latest statistical data available, plus the data for at least one preceding year. Commodities are listed alphabetically. Within each commodity section, tables are arranged to follow the *Year Book* format.

SECTION II presents all *annual tables* in which there have been significant statistical changes since the publication of *Commodity Year Book*. Each table in this section also shows the most recent statistical data available, plus the data for at least one preceding year. Commodities are listed alphabetically. Within each commodity section, tables are arranged to follow the *Year Book* format.

SECTION III contains charts of cash prices for approximately 35 selected commodities. These charts are plotted on a monthly basis and cover about 10 years of activity. They too, are updated for each issue of the *Abstract*.

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Commodity
Year Book

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INTRODUCTION

Commodity futures trading volume in the United States soared 24 percent to a new record high in 1983, influenced by interest rate and currency developments, the economic recovery, and unusual weather patterns in some important world crop producing areas.

Shifting worldwide commodity supply/demand and price relationships in response to such factors as changes in the economic climate, government trade policies, and weather developments emphasize the importance of a continuing evaluation of commodity events as they relate to preceding years.

Commodity Year Book 1984 is designed to facilitate the relating of unfolding developments to past data in the analysis of commodity prices. Its revised and expanded tables, text, and price charts provide important comparisons for the agricultural and industrial commodities, and financial instruments traded on futures exchanges—as well as for many other commodities. The feature studies in Commodity Year Book 1984 are presented to help the reader to evaluate and take advantage of potentially profitable trading opportunities in some of these markets.

"The Petroleum Futures Complex: Factors Affecting Supply/Demand and Prices," our first feature study, should be of widespread interest to traders because of the dramatic increase in energy futures trading volume, and because political instability in the Persian Gulf continues to foster uncertainty regarding the supply and demand outlook for crude oil and its products. The study discusses the heating oil, gasoline, and crude markets; seasonal demand and inventory factors; spreads, and guidelines for futures traders. It also provides perspective when the important role played by petroleum in the rate of inflation is viewed. The author, Dr. Arnold E. Safer, is president of Energy Futures Group, Inc. of Bethesda, Maryland.

Changes in the structure of the aluminum industry have contributed to increased price volatility and the attendant risks of commitments in this important metal. Trading in aluminum futures has been conducted on the London Metal Exchange (LME) for more than five years, but futures trading in the U.S. was initiated only in December 1983 on COMEX in New York. The feature study "Understanding the Aluminum Futures Market" by Arnold Brisk provides a comprehensive view of the aluminum industry, including factors determining supply and demand, pricing methods—including how to use the LME and COMEX futures markets for hedging and spreading purposes, and the importance of carrying charges. Mr. Brisk is a senior metals analyst in the Beverly Hills office of Prudential-Bache, and has contributed several feature articles on metals over the years.

Soybean futures have consistently been among the leaders in trading volume, and trading in soybean oil and soybean meal is also active. The soybean complex has also been a favorite vehicle for spreads, and the feature study "Spreading in the Soybean Complex" by Phillip E. Tiger discusses historical, seasonal, cyclical, and technical factors affecting soybean complex spreads—and provides examples of spreads which have had a good "track record." Mr. Tiger, a vice president and commodity manager in the Washington office of E. F. Hutton, is a well-known authority on commodity spreads, and also publishes a semi-monthly market letter devoted to spread trading.

The wide acceptance accorded stock index futures trading, as evidenced by its significant trading volume, has aroused considerable interest in the prospects for trading futures contracts based on the CRB Futures Price Index. Our final feature study "The CRB Futures Price Index—'A Basket of 27 Commodities' That May Soon Be A Futures Contract" explains the composition of the index and its excellent record as an "inflation hedge" as shown by correlations with important economic data, including the Producer Price Index, the Consumer Price Index, and the Index of Industrial Production. The author of this feature article, Stephen W. Cox, is a Senior Analyst for Commodity Research Bureau, and is also on the editorial board of the Commodity Year Book.

We wish to express our appreciation for the assistance provided us by governmental agencies, various trade associations and publications, and other organizations. We have attempted to list all of these institutions on page 4.

The Editorial Board
May 1984

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Aluminum Association
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Chicago Mercantile Exchange
Citrus Associates of the N.Y. Cotton Exch., Inc.
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United States Treasury Department
Winnipeg Commodity Exchange
Wool Services Co.
Zinc Institute, Inc.

THE COMMODITY PRICE TREND

The commodity price level rebounded in 1983. The Commodity Research Bureau Futures Price Index ended 1983 at 277.6 percent of its 1967 base—up 19 percent from the year-earlier level and 23 percent above the 4-year low of 225.8 recorded on October 4, 1982. The most significant year-to-year percentage gains were posted by the Oilseed group (34 percent), the Imported group (21 percent), and the Grains group (16 percent). The Livestock and Meats group was up 4 percent, the Industrials group unchanged, and the Metals group declined 7 percent.

The CRB (BLS-Formula) Spot Market Index posted a slightly larger gain in 1983 than the Futures Index, closing the year at 277.8 percent of its 1967 base, up 22 percent for the year and 23 percent above its 4½-year low of 225.5 recorded on December 21, 1982. The Raw Industrials group advanced 24 percent and the Foodstuffs group rose 19 percent.

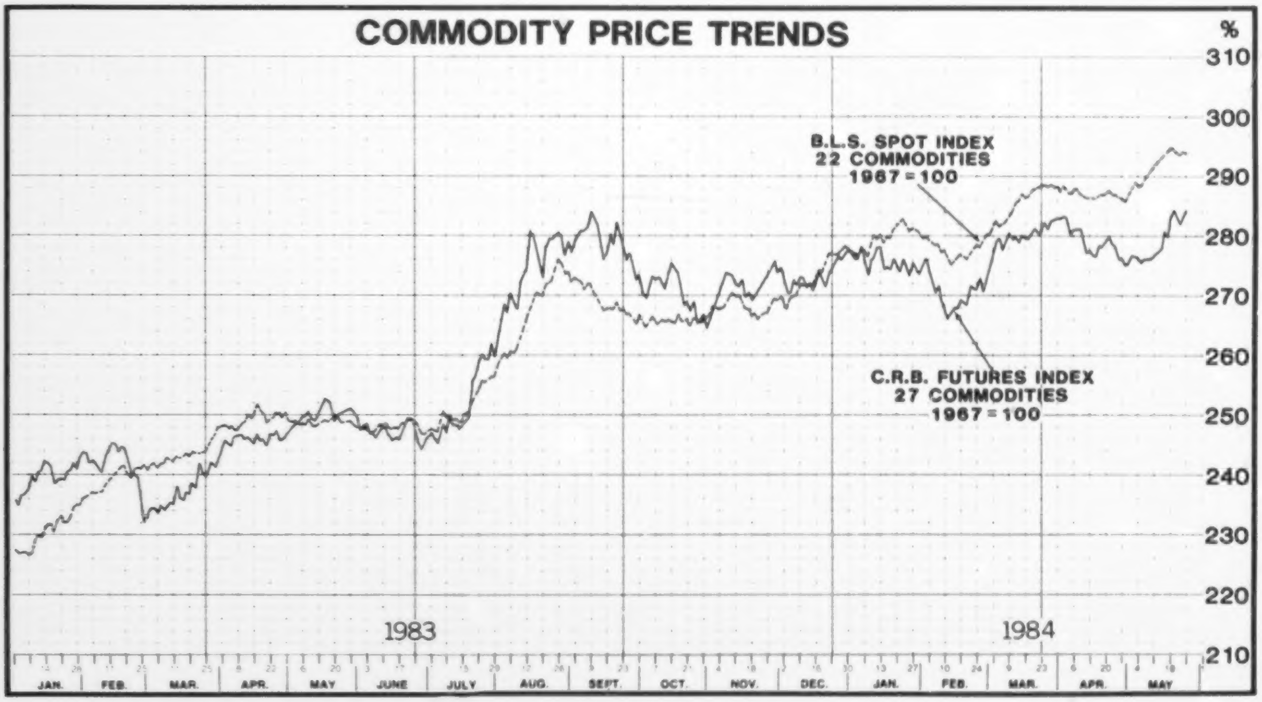
The domestic purchasing power of the U.S. dollar, as measured by the Consumer Price Index, continued to decline throughout 1983, to 32.9 cents compared with 34.2 cents a year earlier and 36.7 cents at the end of 1981.

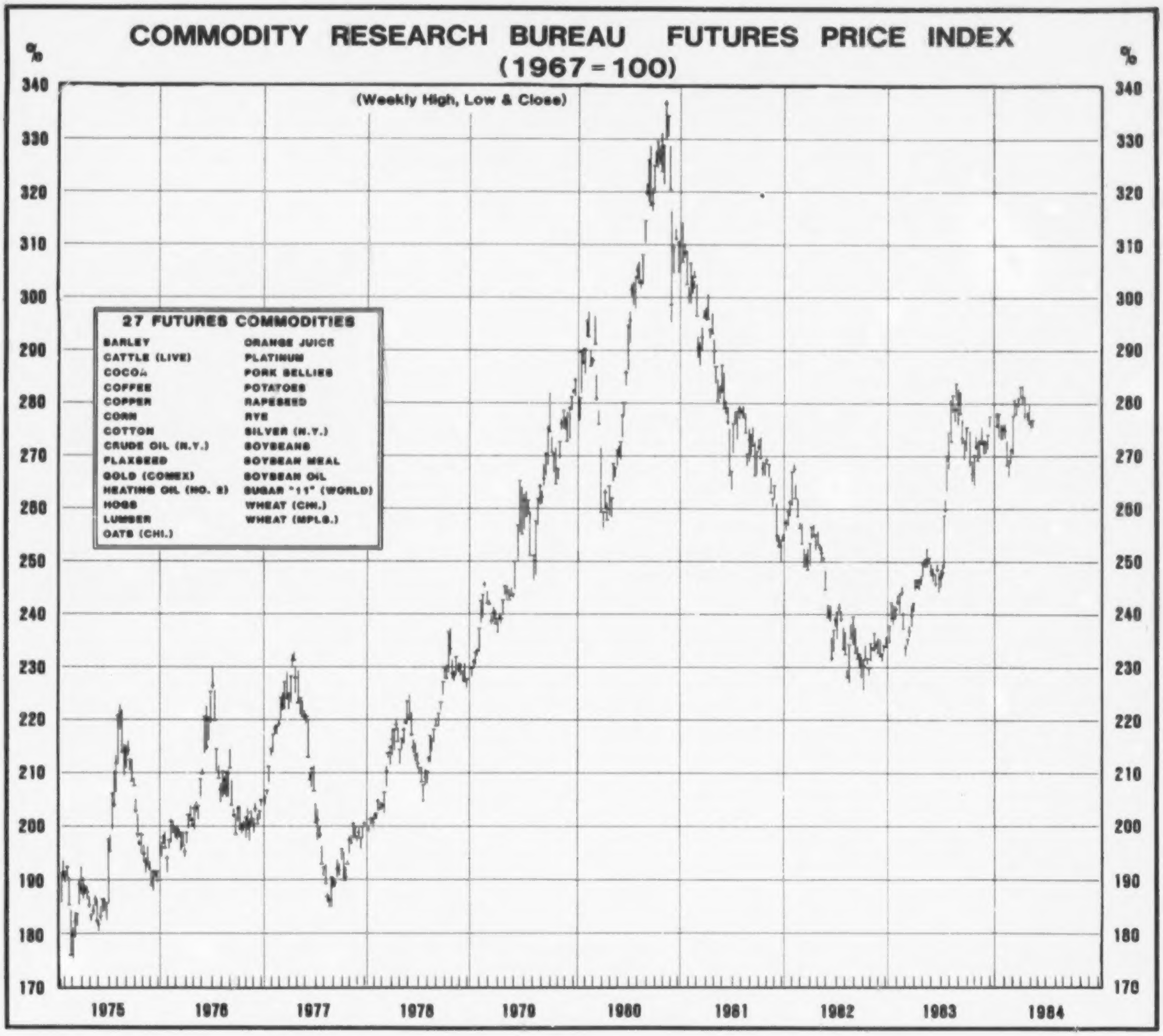
Recovery from recession was a major factor contributing to generally firmer commodity prices in 1983. The more robust than generally anticipated rebound in interest rate sensitive residential housing activity and auto production—major consumer-related segments of the economy having a widespread ripple effect on overall economic activity—contributed greatly to the primarily consumer-oriented recovery in 1983.

Agricultural commodity prices were given a lift by reduced U.S. plantings in 1983 for many commodities, and adverse weather which resulted in above-average abandonment of planted acreage and reduced yields for some important crops. Sharp acreage reductions for some basic crops resulted from heavy producer participation in the 1983 USDA acreage reduction program (ARP) and Payment-in-Kind (PIK) program.

It is noteworthy that the 1983 high of 283.8 for the CRB Futures Price Index occurred on September 9 in the wake of concern over the adverse effect of the late summer drought on oilseed and feedgrain supplies. However, the combination of high prices and the generally strong U.S. dollar forced a reduction in demand and prices later.

As mid-year 1984 approached, markets were faced with many uncertainties. There was some belief that rising U.S. interest rates would choke off the recovery in residential construction and auto production, and nip in the bud the improved outlook for capital expenditures. Other countries were concerned that the continued high U.S. federal budget deficit and related high U.S. interest rates would abort recovery in developed countries. Uncertainty persisted about the ability of the world banking system to cope with debt problems of some developing countries. The continuing trend towards trade protectionism—influenced in part by still high rates of global unemployment—was also a matter of concern. Uncertainty persisted regarding energy costs, which have an important bearing on the rate of inflation. The European Community's (EC) common agricultural policy (CAP) reforms promised to influence commodity prices. And, the 1984 U.S. presidential election year added yet another uncertainty to the outlook for commodity prices.





CRB Futures Price Index, Monthly High, Low & Close 1967 = 100

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Range
1980	High	290.4	297.4	296.9	263.7	271.8	286.4	303.2	308.4	329.0	329.9	337.6	329.0	337.6
	Low	276.8	287.5	258.0	256.3	259.4	269.4	289.5	301.9	310.4	316.8	321.8	295.1	256.3
	Close	289.6	288.4	258.0	258.1	270.1	286.4	302.3	308.4	319.4	327.1	334.8	308.5	—
1981	High	314.5	306.9	298.4	300.7	290.0	286.0	279.7	279.7	276.0	274.0	269.8	264.8	314.5
	Low	299.2	296.7	287.5	287.7	280.7	263.9	266.6	268.1	266.8	266.6	260.7	250.5	250.5
	Close	300.1	296.7	298.4	289.1	287.5	263.9	279.3	269.4	268.6	268.9	262.2	254.9	—
1982	High	267.2	268.6	257.5	257.3	253.3	242.0	242.4	238.4	239.8	234.3	236.3	235.7	268.6
	Low	256.0	256.5	248.7	252.5	244.9	231.5	233.2	227.1	227.9	225.8	231.2	231.1	225.8
	Close	267.2	256.5	250.1	253.1	244.9	239.3	233.7	235.4	227.9	229.9	235.7	234.0	—
1983	High	242.7	245.1	242.1	247.3	252.7	249.5	261.7	281.6	283.8	275.4	275.6	277.6	283.8
	Low	234.8	232.1	232.8	244.7	247.2	244.2	245.2	263.5	272.5	264.6	265.9	270.4	232.1
	Close	242.7	232.1	242.1	246.7	249.7	246.2	259.9	278.7	273.5	264.6	273.9	277.6	277.6
1984	High	278.3	276.1	283.0	283.2									
	Low	273.2	266.1	274.7	275.1									
	Close	273.6	272.5	283.0	275.1									

Source: Commodity Research Bureau, Inc.

T.006A

THE PETROLEUM FUTURES COMPLEX: Factors Affecting Supply/Demand and Prices

BY DR. ARNOLD E. SAFER

Futures markets are revolutionizing the price system in the oil industry.

From a slow beginning in 1978, the New York Mercantile Exchange (NYMEX), New York Harbor Fuel, No. 2 fuel oil futures contract is literally setting spot prices for the petroleum product around the Northeast and increasingly on the Gulf Coast. The traditional posted price system is being challenged in a way never before attempted in the oil industry. On the one hand, jobbers and resellers are increasingly reluctant to take contract oil at posted prices above those "on the Merc," while on the other hand, refiners have been quick to raise postings in response to increased "Merc" prices. In fact, some sellers are offering No. 2 oil under contract prices based on the NYMEX daily average. The NYMEX prices are today the "market price" for No. 2 oil.

A similar market development is now beginning with motor gasoline. In 1981, NYMEX opened its leaded regular New York Harbor gasoline contract. During that first year 70,000 contracts were traded (equivalent to 70 million barrels), at least four times the volume achieved in the first year of the No. 2 oil contract. In 1983, some 406,843 contracts of gasoline were traded, compared with 1,868,322 contracts of No. 2 heating oil and 323,153 crude oil contracts.

In addition, the London-based International Petroleum Exchange (IPE) trades a futures contract in gasoil (similar to No. 2 fuel oil), with delivery in Rotterdam, and has recently opened a crude oil contract for the same delivery area. The New York Cotton Exchange has an active propane futures contract, and other major exchanges, including the Chicago Board of Trade and the Chicago Mercantile Exchange, have either offered or are preparing to open trading in futures contracts for petroleum products and crude oil.

Crude Oil Futures

In March of 1983, NYMEX initiated trading in a crude oil contract with delivery at Cushing, Oklahoma. The nexus of approximately 15 pipelines, Cushing provides a point of transfer for approximately 1.5 million barrels of crude oil a day. Two of the pipelines carry foreign and Alaskan crude from the Gulf Coast, so that a variety of crudes flow through Cushing. The most popular crude oil traded at Cushing is West Texas Intermediate (WTI), which represents the par value crude for NYMEX futures trading. Upon delivery, appropriate financial adjustments are made for quality differentials. A new futures contract for the Brent North Sea crude was opened by the IPE in November of 1983. Futures arbitrage between foreign and domestic crudes will now become possible.

The growth of crude oil futures trading during its first year is likely to surpass that of gold and financial futures. From ground-zero in late March of 1983, daily crude futures trading on NYMEX has risen to as high as 10,000 contracts, and averaged around 6,000 contracts (each contract equals 1,000 barrels). A key reason for the success of crude oil futures trading has been the growth of crude oil spot trading—estimates as high as 50 percent of the crude moving in international trade have been suggested by informed observers. Domestically, the proportion is probably lower, but some traders have suggested around 20 percent of U.S. crude production is now being sold on the spot market. On a world-wide basis, this would mean that about 15 MMB/D (millions of barrels per day), or fully one-third of current consumption, is being traded in spot markets.

The principal force behind this dramatic revolution in the oil pricing mechanism has been the transformation of refining companies from that of equity offtakers to arm's length purchasers increasingly dependent on downstream profitability. Intense refining and marketing competition in the face of declining volume has led to increasing reluctance by purchasing refiners to pay official prices. The value of the petroleum product in the marketplace now drives the price of crude oil.

Gasoline and No. 2 oil (heating oil and diesel fuel) comprise around two-thirds of the output of a typical U.S. refinery. Another 8–10 percent is jet fuel whose price is closely correlated to No. 2 oil. Residual fuel oil, comprising an additional 10–12 percent is priced in relationship to crude oil itself. Including propane, over 90 percent of refined petroleum product output can be traded on the futures markets, making oil an ideal commodity for hedging and speculation. The remainder of this article focuses on the fundamentals underlying the key oil futures markets, and on the interrelationships among them.

The No. 2 Heating Oil Market

The oldest and largest-to-date energy futures contract is the NYMEX No. 2 Heating Oil. It is a misnomer since No. 2 oil includes diesel fuel and several other minor petroleum products. The oil industry calls these products "middle distillates," since they are distilled from the middle of the crude oil barrel. Distillate fuel oil (DFO) is used primarily for space heating, diesel engine fuel for transportation and stationary energy needs, and for some electric power generation. The East Coast market for distillates comprises over one-third of the national market. New York Harbor alone handles an estimated 10 percent of the nation's total consumption. Over the period 1960–73, distillate consumption grew at 3.5 to 4 percent per year, with little apparent sensitivity to business cycle fluctuations. Since 1974, demand has declined sharply with the rise in world oil prices. Although demand increased in the 1976–78 period, the average annual 1974–1983 growth has been minus 1.0 percent.

Table 1 profiles distillate consumption over the last four years. On-highway diesel is the *single* largest use of distillate fuel. Heating use, including all of the residential market, and most of the commercial, farm, industrial and electric utility sector, comprised over 40 percent of total distillate consumption in 1982. Heating (i.e., heating oil) use of distillates accounted for the vast majority of the recorded fluctuations in distillate demand.

Although quarterly statistics are not collected by use category, Table 2's quarterly summary of total (1982) distillate fuel oil supply/demand balances shows that the seasonality of distillate use is still substantial, despite the declining proportion of heating uses. Between the first and third quarters of 1982 distillate demand declined by 910,000 barrels per day, on average. The rise and fall of heating oil uses accounts for most of this swing.

Seasonal Factors

Prices fluctuate partially as a result of seasonal demand fluctuations. The industry, at both refining and distribution levels, tends to operate on a target inventory system. These targets are based on historical inventory levels at critical points during the year. At the end of 1983, distillate stocks were 150 million barrels, some 29 million barrels less than the prior year. These stocks were expected to be reduced during the first quarter of 1984, as winter demand remained high with the colder weather.

Table 2 also shows only a moderate increase in refinery output of middle distillates as the year progresses, so that inventory changes absorb the seasonal swings in consumption. Thus, stocks are typically run down in the first quarter when consumption is at its highest, and then gradually build up through the spring, summer and fall for the next year's heating season.

Table 1

U.S. Distillate Fuel Oil Consumption by Use 1979–1982 (000 barrels per day)

Use	1979	1980	1981	1982
(Heating)				
Residential	741	623	541	495
Commercial	273	252	216	207
Industrial	273	236	220	195
Farm	233	202	191	188
(Subtotal)	1,520	1,313	1,168	1,085
Oil Company	60	60	80	81
Elec. Utility	128	87	50	33
Railroad	284	280	275	255
Vessel Bunkering	114	96	112	93
On-Highway Diesel	897	886	932	926
Military	51	52	49	42
Off-Highway Diesel	179	142	107	102
All Other	95	55	58	54
U.S. TOTAL	3,327	2,977	2,829	2,671

Source: U.S. Department of Energy Statistics

Table 2

U.S. Distillate Supply/Demand Balances Quarterly, 1982 (000 barrels per day)

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Demand	3,171	2,625	2,261	2,637
Opening Stocks (000 barrels)	192,000	126,000	124,000	161,000
Closing Stocks (000 barrels)	126,000	124,000	161,000	179,000
Stock Change	−733	−22	+402	+196
Imports (Net)	4	14	21	37
Refinery Output	2,435	2,568	2,633	2,784
Crude Input (Total Refinery Runs)	11,370	11,657	12,154	11,662
Distillate Yield (%)	21.4	22.6	21.7	23.9

Source: U.S. Department of Energy Statistics

Due largely to the world-wide surplus of productive capacity in both the crude oil and refining stages of the industry, petroleum product inventories are being pared back to levels well below historic norms. Part of the explanation for lower distillate stocks lies in the demand reduction experienced over 1979–1982. From an annual peak of 3,432 MB/D (thousands of barrels per day) in 1978, DFO demand fell to 3,071 MB/D in 1982. However, when measured in days' supply (i.e., primary inventories divided by daily demand) inventories are low by historic standards.

Additional explanation for reduced inventory levels can be found in the increasingly deseasonalized DFO consumption pattern. The decline of heating uses, and the rise of highway and other less seasonal uses of distillates, have produced an overall flatter seasonal demand profile. In 1982, (see Table 2) DFO consumption during the third (low) quarter was approximately 29% less than in the first (peak) quarter. Preliminary data for 1983 showed this difference to be just 14 percent, or just half of the seasonal variation of one year before.

Together, the overhang of productive capacity in the production and refining stages of the industry, and the deseasonalized character of a shrinking overall market, has allowed refiners to rely less on seasonal stock swings and more on adjustments in refinery output to accommodate seasonal swings in demand.

Refiners entered the 1983/84 heating season with primary distillate stocks of approximately 165 million barrels (as of early December 1983). Overall, refining utilization rates were approximately 75 percent, although they fluctuated from week to week by 1–3 percentage points. Weather-related swings in distillate demand were expected to be largely satisfied by adjustments in output levels, and to a lesser extent by imports. Primary inventories were expected to be drawn down towards a target of roughly 125 million barrels by the end of the first quarter of 1984. This translated to a stock drawdown of approximately 10 million barrels per month, beginning in mid-December 1983. With this target in mind, the attentive trader monitored weekly reports of refinery production, imports and stock changes to determine whether the target inventory level was being met.

By late February, distillate production should have been reduced, followed by an increase in gasoline production over the second quarter. Over the balance of 1984, refinery output will gradually increase as stocks are likely to be built towards a late November peak of 160–165 million barrels.

Despite a general expectation that DFO demand would rise slightly in 1984, the overhang of refinery capacity (and surplus crude oil market conditions) place a damper on temporary price strength. Late 1983 U.S. refinery utilization rates of 75 percent, with 22 percent dedicated to distillate production, translated to approximately 2,700 MB/D of distillate output. An increase of capacity utilization to 90 percent, holding the distillate yield constant, would allow production of 3,225 MB/D. For this reason, the bears are expected to continue to dominate market mentality through 1984.

The Gasoline Market

Measured in gallonage, the U.S. motor gasoline market more than doubles the size of the distillate fuel oil market. The products currently traded, No. 2 heating oil and regular leaded gasoline, comprise roughly half of the volume of these fuel groups over the course of a year. Although the mechanics of futures trading in regular leaded gasoline and in No. 2 heating oil are almost identical, motor gasoline is quite different from heating oil in its use, market structure, and physical characteristics.

Total U.S. motor gasoline consumption in late 1983 was running at an annual rate of approximately 6.6 million barrels a day, compared to 2.7 million barrels per day for distillate fuel. The transportation sector consumes over 90 percent of gasoline including passenger auto, commercial truck, boat and other forms of vehicular demand. Vehicular uses in construction and agriculture account for the remainder of gasoline consumption. Nearly 75 percent of motor gasoline is consumed by private individuals. Not surprisingly, therefore, consumption peaks during summer driving months. Demand levels are related primarily to the fuel efficiency of the motor vehicle fleet, although the state of the economy (in particular the amount of disposable income for driving) and the price of gasoline are also major determinants of final consumption.

Gasoline demand tends to be quite inelastic to short-term price changes simply because alternative forms of motor transport are not immediately available to most consumers. Although consumer behavior patterns are not quickly changed, after an adjustment period demand does indeed respond to price. This response may be direct in terms of cutting back on driving, or indirect, via the production and purchase of smaller and more fuel efficient automobiles.

Viewed regionally, the East Coast market comprises over one-third of the national market. However, total gasoline consumption is far more geographically dispersed than in the case of heating oil, which is dominated by the Northeast, U.S. market. Roughly 36 percent of the U.S. gasoline consumption occurs in the northern and eastern United States, compared with 40 percent for distillate fuels (and a far higher percentage for heating oil alone). Motor gasoline imports are heavily concentrated in the East Coast. In 1982, this region received approximately 148,000 barrels per day or 75 percent of total motor gasoline imports, most of which originated in Western Europe and the Caribbean.

Gasoline exports have recently risen as high as 44,000 barrels per day, or nearly 25 percent of average imports. Importantly, most of these exports originate in the U.S. Gulf Coast, the major U.S. gasoline production region. Internally, gasoline is shipped from the Gulf Coast to consumption areas in the eastern and midwestern United States. Two-thirds of the Gulf-to-East Coast product flow is carried by the Colonial, Plantation, and Explorer pipeline systems. The remainder is carried largely via tanker and barge. The Gulf Coast and Northeast markets are therefore critically linked in their supply, demand and price relationships.

Motor gasoline supplied (refinery production and net imports) does not fluctuate widely over the course of a year. Although refiners may adjust their total level of output, or capacity utilization, the ratio of motor gasoline yields *vis a vis* other products is limited by technical cost considerations. Over the past three years (1980–1982) motor gasoline accounted for 45 percent of the U.S. refined product slate. Monthly fluctuations over this period ranged as high as 48 percent and as low as 43 percent. Imports, increased refinery utilization, and inventory adjustments serve as immediate sources of incremental supplies. However, as the average crude oil mix changes, and as refinery upgrading continues, gasoline yields are likely to increase and become more responsive to short-term market incentives.

The composition of total U.S. refinery output of motor gasoline is evolving towards a greater share of unleaded supplies, as the U.S. auto fleet converts to newer, unleaded only vehicles. Currently (late 1983), leaded gasoline comprises about 47 percent of the total U.S. gasoline production, down from 72 percent in 1977. Over the next decade the leaded gasoline share of the total is expected to decline to less than 20 percent of total supplies. However, economic recession has slowed the auto fleet turnover, and the decline of the leaded share of the market has slowed. The evolving composition of gasoline will likely produce new relationships between leaded, unleaded, and the premium grades, creating a need for several gasoline futures contracts. Price interdependence among various grades of gasoline and among petroleum products in general will necessitate a more detailed knowledge of market interrelationships. The role of diesel in total distillate, competition between diesel and gasoline, and changing price relationships among the various gasoline products are several important fundamental trends for the futures market trader to watch.

Comparative Statistics

Table 3 compares motor gasoline and distillate fuel oil consumption and output. These figures are annual averages for the nation. They show gradual volume declines over the past five years, but also demonstrate the relative stability of overall refinery yield patterns. As demand has fallen, refiner utilitization has fallen, but the relative product mix has remained reasonably stable. However, in 1983, product demand recovered somewhat, particularly for motor gasolines. As a result, capacity utilization rates rose slightly (albeit from a lower total capacity), and motor gasoline yields in particular increased slightly. Demand for distillate fuel recovered in the second half of 1983. Increasingly, incremental supplies came from imports and adjustments in refinery output, with less reliance on stock building and withdrawals.

Table 3

Comparative Petroleum Product Statistics (Thousands of barrels per day)

	Consumption		Refinery Output		Net Imports		% Yields		Capacity
Year	Motor Gasoline	Distillate Fuel Oil	Motor Gasoline	Distillate Fuel Oil	Motor Gasoline	Distillate Fuel Oil	Motor Gasoline	Distillate Fuel Oil	Utilization
1976	6,979	3,130	6,841	2,924	128	144	45.2	21.8	88.1
1977	7,176	3,350	7,033	3,278	215	249	43.4	22.4	89.1
1978	7,412	3,429	7,169	3,167	189	170	44.1	21.4	86.5
1979	7,035	3,308	6,852	3,153	181	192	43.0	21.5	84.7
1980	6,579	2,864	6,506	2,662	140	139	44.5	19.7	75.5
1981	6,588	2,829	6,405	2,613	155	168	45.0	19.8	68.6
1982	6,539	2,671	6,338	2,606	177	19	46.2	21.5	69.9
1983^e	6,633	2,675	6,375	2,465	245	110	47.4	20.6	71.5

e = Estimated

Source: U.S. Department of Energy Statistics.

Seasonality in Demand and Inventory

Motor gasoline demand and inventories do not exhibit as pronounced a seasonal pattern as distillate fuel. However, because motor gasoline comprises nearly half of the total U.S. refined product output, and a proportionately larger share of refiner profits on product sales, moderate changes in motor gasoline demand can have substantial effects on crude oil demand, refinery utilization rates, stocks and, of course, pricing. These effects are felt not only in the gasoline market, but may ripple through other product markets as well due to the joint product nature of petroleum refining.

The bar chart on page 11 compares seasonal demand patterns for motor gasoline and distillate fuels for a recent six-year period (1976–1981).

Motor gasoline demand normally peaks in the late spring or early summer, and reaches a low point in mid-winter. Stocks normally peak in late winter prior to being drawn down in the spring and summer. This seasonal pattern contrasts with the more pronounced pattern of distillate fuel, which usually reaches peak consumption in January, and peak stock levels in November.

An interesting development in the distillate market is the reduced seasonal demand pattern, which reflects the larger role of diesel as a percent of total distillate fuel use. Currently (late 1983) diesel is estimated at almost half of the total distillate fuel consumption. As diesel's share of the distillate market grows, distillate consumption and stock patterns will continue to become less seasonal. Diesel's success in competing with gasoline for the transportation market will rest largely on the relative price outlook for the two products.

As shown in Table 4, gasoline inventories, although larger than distillate inventories, do not fluctuate as markedly over the course of the year. In the last three years (1981–1983), distillate stocks have ranged from a peak of 207 million barrels in September 1981 to a recent low of 103 million barrels in April 1983. Over the same period motor gasoline stocks reached a high of 284 million barrels in February 1981 and a low of 214 million barrels in May 1982.

When reading inventory levels for motor gasoline or distillates, the absolute level of inventories should be adjusted to a seasonalized normal level by accounting for demand. Days' supply, or inventories divided by demand for the same period, is a common measure of market surplus or tightness. Thus, while April 1983's recent 221 million barrel reading for gasoline inventories indicated a relatively low absolute level of stocks by historic standards, when adjusted for demand, inventories appeared only slightly below normal in terms of days' supply. Although gasoline inventory and demand levels do not fluctuate as dramatically as those for distillate fuel, incremental supply and demand changes produce spot price movements which are just as volatile as spot distillate prices.

Fundamental analysis of seasonal supply and demand relationships can help to reveal the basis for historic price spreads. Seasonal factors, therefore, are extremely important to both time and inter-product price trading. Physical traders essentially arbitrage the difference between current costs and projected future prices when making inventory fill decisions. Futures market prices reflect the market's net assessment of seasonal supply, demand and price relationships. Crude oil price movements, the relationship between spot and contract prices and product margins also help to determine the likely timing and strength of seasonal supply and demand patterns.

SEASONAL PATTERNS OF
U.S. DISTILLATE AND GASOLINE DEMAND.
RECENT YEARS

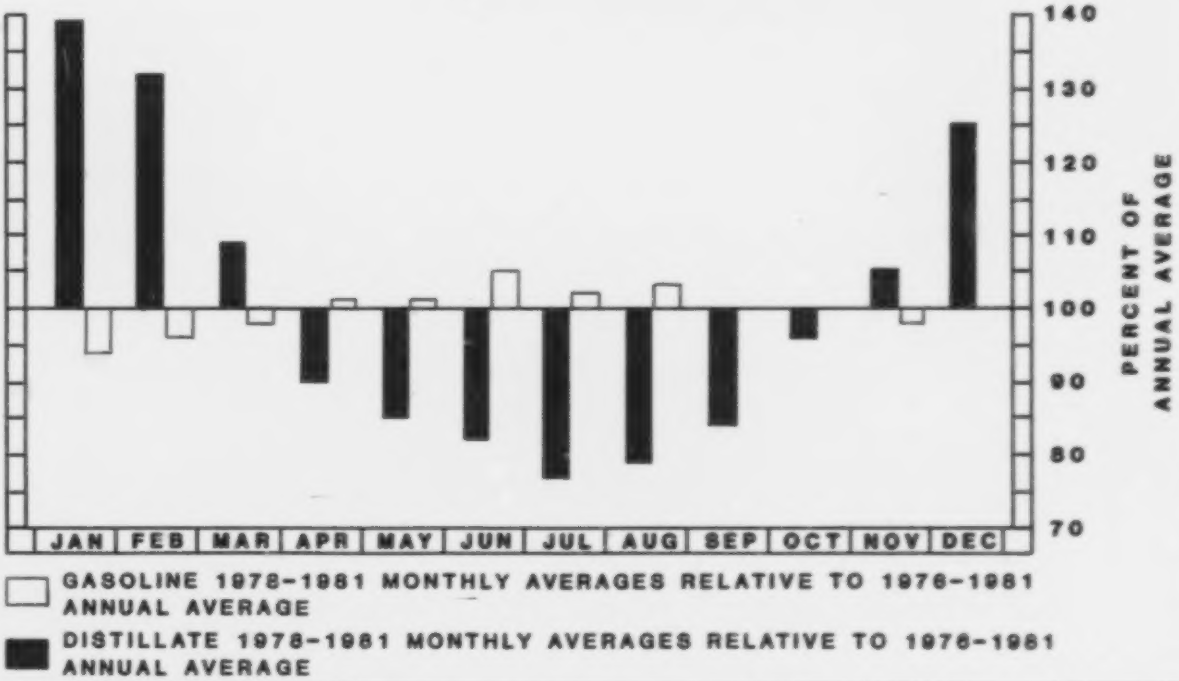


Table 4 also shows average monthly spot prices for gasoline and distillate. In the fall and winter, spot gasoline is likely to sell at a discount to spot heating oil, while in the spring and summer, the converse is true. As a result, the alert trader may be able to profit from this inter-product spread as fluctuating market conditions impact each product in different ways.

Refining

On an annualized basis, U.S. refinery production of motor gasoline averages approximately 46 percent of the total product yield. Distillate output averages roughly 21 percent. Given total U.S. refinery capacity of approximately 16,300,000 barrels per day and capacity utilization rates at 70 percent, each percentage point change in product yields translates to nearly 160,000 barrels per day of refined product output. Therefore, while apparently insignificant on an annualized basis, the refining sector's capability to finetune product yields is very significant in terms of daily product supplies—and product prices.

Petroleum refining is a joint-product operation. Each barrel of crude oil yields a slate of refined products. Gasoline is refined from the lighter molecules of crude oil, distillates from the heavier molecules. A catalytic cracking process is required to transform heavier molecules into lighter-end gasoline products. Increasing the share of gasoline necessitates running catalytic cracking at higher levels and incurring added costs if the refinery is operating at or near capacity. Catalytic cracking capacity can be upgraded, but only with considerable delay and added cost, certainly not in response to unanticipated demand changes.

Refiners' capability to adjust their product mix is far exceeded by the seasonal swings in product demand, much less unanticipated changes in demand. For this reason product stocks (and imports to a lesser degree) play the crucial buffer role in balancing refined product output with demand. Excess refining capacity also serves to balance the system from time to time.

Individual refineries—in particular larger, sophisticated refineries—possess a greater degree of technical flexibility in adjusting their product mix in response to product market conditions. For example, heating oil stocks can be converted into gasoline via a catalytic cracking process. However, this process is expensive, and is unlikely to be warranted for substantial volumes given the availability of imports and additional refinery capacity. Refiners are more likely to adjust their crude oil slates to yield a higher portion of the derived product (e.g., gasoline).

Given a rise in gasoline profit margins relative to other products, refiners may increase their total product output, in which case all product prices may be depressed. Or, refiners could increase the quantity of lighter, less-sulfurous crude oil run—thereby yielding a higher portion of gasoline. In this case (or if heating oil stocks are converted to gasoline) the trader might expect distillate prices to rise somewhat relative to gasoline.

Table 4

Monthly U.S. Motor Gasoline, Distillate Fuel Oil Supply and Demand Balances

	1983											
Demand (MB/D)	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.ᵉ	Oct.ᵉ	Nov.ᵉ	Dec.ᵉ
• Gasoline	5981	6022	6843	6501	6540	7008	6773	6946	6653	6665	6675	6700
• Distillate	2760	2832	2900	2713	2341	2526	2248	2467	2588	2525	2860	3200
Refinery Output (MB/D)												
• Gasoline	6020	5848	5897	6202	6386	6646	6704	6539	6714	6290	6593	6472
• Distillate	2314	2136	1991	2169	2444	2545	2600	2612	2780	2601	2727	2595
Net Imports (MB/D)												
• Gasoline	+148	+142	+182	+283	+243	+279	+247	+247	+200	+246	+315	+260
• Distillate	−115	−47	−17	+26	+91	+135	+204	+261	+154	+200	+150	+153
Stock Change Indicator (MB/D)												
• Gasoline	516	0	−871	−100	+129	−67	+258	+161	+100	−129	+233	+32
• Distillate	−355	−724	−903	−533	+194	+567	+419	+322	+333	+322	+17	−452
Days' Supply (DS)												
• Gasoline	42.0	41.7	32.7	34.0	34.4	31.9	34.1	32.5	34.4	33.7	34.6	34.6
(Normal*DS)	41.6	41.2	38.0	35.9	34.3	33.4	33.8	32.7	34.8	33.5	34.9	35.9
• Distillate	60.9	51.9	41.0	38.0	46.6	45.1	58.2	58.1	59.5	64.8	57.3	46.9
(Normal*DS)	42.8	39.6	43.9	50.2	57.0	63.7	77.3	81.9	82.0	74.4	72.6	58.5
Spot Prices** (¢/gal.)												
• Gasoline	82.7	78.9	81.2	88.5	85.0	86.1	86.2	85.0	81.5	79.6	79.7	75.2
• Distillate	81.7	77.3	72.9	80.8	79.4	80.2	81.0	84.0	82.7	79.9	80.2	80.5

e = Estimate

* = Normal DS refers to the *average days' supply* (ending stocks divided by average monthly demand) for a given month over the recent six year period (1978–1983).

** = Spot prices utilized are *Platt's Oilgram Price Report* monthly averages for New York Harbor.

Source: U.S. Department of Energy and Statistics

Guidelines for Futures Traders

The futures trader should watch weekly refined product output and capacity utilization figures reported by the American Petroleum Institute. This data, in combination with import and stock data also commonly carried in the trade press, will provide a clearer understanding of the effect of industry supply actions on product prices.

In recent years, two major trends in the U.S. refining sector have developed, each of which has important implications for futures traders. First, since 1979 substantial refining capacity has been closed down, or temporarily shut down, in response to declining petroleum demand. An estimated 3–4 million barrels per day of crude oil refining capacity has been shut down, of which possibly one-half to one-third could be returned to service within several months. Shutdowns have been concentrated among small refineries which produce a relatively larger yield of heavier products. Many of these refineries were initially opened as a result of the government's entitlements program which subsidized small refiners' crude oil purchases. With the elimination of that subsidy, and the overall decline in demand, many have been unable to compete. In addition, major oil companies have been forced to close one or several refineries, because of the slump in demand.

A second major development since the mid 1970's is the extensive upgrading of refinery processing capabilities. The upgrading investment has been necessitated by the shifting composition of world crude oil availability towards heavier crudes coinciding with a change in the composition of petroleum product demand toward lighter refined products. Since 1979 residual fuel oil demand has fallen off even more rapidly than the demand for gasoline and distillates. Furthermore, refinery margins on the sale of lighter products are far greater than margins from residual fuel oil sales, which are often negative. Today (late 1983) medium grade residual fuel oil sells for less than $25 per barrel, in comparison with gasoline and distillates which sell for approximately $35 per barrel. As a result, the smaller the proportion of residual fuel oil which the average refiner is forced to produce from a given barrel of crude oil, the greater will be his profit margin.

The refining sector, like the distribution and marketing stages of the oil business, is becoming smaller but more efficient, and ultimately more profitable for those who remain in operation. The trader should recognize that current (late 1983) capacity utilization levels, reported at around 70 percent, do not accurately account for the numerous closed, or temporarily mothballed refineries. The operating refineries are producing at greater capacity and are making a larger portion of gasoline and middle distillates than in the past. Increased output flexibility in these lighter products has prompted more refineries to use futures markets as a sensitive price indicator of relative product profitability.

Crude Oil

The major determinant of petroleum product prices is the refiner's cost of crude oil. In the short run, crude oil prices depend upon the world-wide balance between production and consumption, as reflected in inventory changes. In the longer run, the availability and location of spare crude oil productive capacity provides an indication of access to those suppliers. For example, the substantial spare productive capacity in the OPEC nations has forced the continuation of a moderate pricing policy. As recent political and military events in the Mideast have proven, nations traditionally considered hawkish in their price stance may actually cut prices to meet short-term revenue objectives. The net effect is additional price uncertainty, and volatility for the trader.

To explain, and possibly predict, crude oil and petroleum product price changes, it is important to understand the forces influencing world crude oil pricing. The price and amount of crude oil available to refiners at any point in time depends on OPEC's willingness to produce, and non-OPEC production including exports from Communist countries. OPEC's production is based on the difference between world oil demand and non-OPEC supplies. OPEC's price is set to maximize its economic rents. Non-OPEC countries use OPEC's price ceilings as a guide in setting their prices. Given the world's declining dependence on oil and today's growing non-OPEC supplies, the OPEC countries are now realizing that world markets cannot absorb as much oil as they would like to produce.

Table 5 shows that OPEC production in 1983 was likely to average around 17.5 MMB/D (millions of barrels per day), as compared to their combined productive capacity of more than 32 MMB/D. Just five years ago, world consumption was around 53 MMB/D, and non-OPEC supplies, outside the U.S., were only around 7–8 MMB/D. Increasing oil production from the North Sea, Mexico, and many other areas, coupled with rising exports of Soviet oil, have almost doubled non-U.S., non-OPEC sources. Hence, while oil demand has fallen around 8 MMB/D since 1979, the need for OPEC oil has fallen by more than 15 MMB/D. Clearly, OPEC has become the marginal supplier in world markets, forced to either cut production or to cut prices.

Table 5 shows U.S. oil production at 10.7 MMB/D. These figures include natural gas liquids (about 1.6 MMB/D) and refinery processing gains (about 0.4 MMB/D). As a result, crude production alone is around 8.7 MMB/D, including about 1.5 MMB/D from Alaska. Of the 7 MMB/D of continental U.S. production, Texas produces about half. The most popularly traded crude oil traded in Texas is known as West Texas Intermediate (WTI) which encompasses a variety of lighter and sweeter crude oil grades. A substantial amount of this crude oil flows via pipelines to eastern and midwestern refineries via a major terminaling area in Cushing, Oklahoma. NYMEX has based its crude oil futures on this physical flow, and crude oil futures prices are quoted for WTI at Cushing.

Table 5 also shows U.S. production of crude oil and gas liquids at 10.7 MMB/D. Of this total, only 9.1 MMB/D is used as inputs to U.S. refineries. Total crude oil and gas liquids processed at oil refineries amount to around 12.2 MMB/D, necessitating around 3.1 MMB/D of imports. Because imports remain the marginal source, U.S. crude oil acquisition costs will closely follow world oil prices. On average, domestic crude oil is of slightly lower quality, and

Table 5

World-wide Crude Oil Demand and Supply 1983 (estimated) (MMB/D)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter[e]
Consumption[1]	44.5	43.0	45.0	45.5
U.S. Production[2]	10.8	10.8	10.7	10.7
Other Non-OPEC[3]	14.4	14.5	14.8	15.0
OPEC	15.3	16.2	19.3	19.3
Inventory Change	−4.0	−1.5	0.2	0.5

[1] World outside of Communist Area
[2] Includes natural gas liquids
[3] Includes net Sino-Soviet exports
[e] = Estimated

therefore priced slightly below the average delivered cost of imported crude oil. The higher portion of light products obtained from imports explains why refineries are increasingly upgrading their processing capabilities to run more accessible, lower quality crude oils. An interruption of high quality imported crude oils would exert the greatest price effect on light refined products such as gasoline and distillate.

Refinery Margins

Table 6 displays the relationship between refiners' average crude oil acquisition costs and wholesale prices for regular leaded gasoline over a recent six-year period. Refiners' gross margins are expressed both in absolute terms and as a percentage mark-up over crude oil costs. Net margins can be obtained by subtracting transportation, taxes, processing, storage and other costs associated with bringing crude oil to the refinery, processing the crude oil, and selling the resulting product.

Raw material (crude oil) cost and other costs vary widely among refineries, depending on such factors as location, source of crude oil, processing capabilities and other operational variables. More sophisticated refineries, which have incurred the cost of upgrading their technical capability to process lower quality crude oils into higher valued product yield, are in a position to lower their crude oil acquisition costs. Furthermore, their high operating costs are offset by higher margins on product sales. On average, industry-wide refining costs per barrel of crude oil run $6–$8. Taking the upper end of this range to reflect the per-barrel cost of processing crude oil into gasoline, while assuming an average crude oil acquisition of $32 per barrel and an average wholesale price of $1.00 per gallon, leaves a net refiner profit margin of roughly 5¢ per gallon of gasoline sold. (There are 42 gallons in a barrel.)

Clearly, average refiners' profit margins are not large. However, margins vary widely among individual refiners and across geographic markets. More importantly, refiner margins exhibit great fluctuation between periods of product scarcity (or perceived scarcity) and product surplus. Note the large increase in gross margins over 1979–1980, and the subsequent decline through 1983.

Although this example focused only on refinery margins from gasoline sales, a commonly used, broader measure of refinery profitability is the so-called "netback." Netback refers to the product value of a given crude oil. It is stated as the margin obtained from processing a crude oil through a standard refinery configuration and selling the product output in a given market. Netbacks are usually quoted in reference to a particular crude oil, a specific regional product market, and a standard refinery yield and cost structure. A negative netback signals refiner losses while a positive netback signals profit. However, these measures are averages and vary widely for the individual refinery. Netback values are more immediately useful in signalling the direction of price pressure in the crude oil market, in particular on spot crude oil prices.

Spot vs. Contract Pricing

A simple and generally more accessible indicator of the direction of price pressure in crude and product markets is the disparity between spot and contract prices. Wholesale prices are set in essentially three types of markets. The traditional, and largest, is the contract market. The contract market refers to the standard supply commitments made between supplier and purchaser. These contracts specify monthly volumes, and other performance terms, while price is based on supplier's posting, or official prices internationally. Industry journals commonly quote these prices, which do not change very frequently unless market conditions are unstable; they certainly are not as volatile as spot prices.

The spot market refers to transactions of a one time nature, although the same parties may engage over and over again in spot transaction. These deals carry no future volume commitments and prices are set by prevailing market forces at the time of each transaction. Spot prices freely fluctuate from day to day, and even vary within the day. Although confirmation of exact transaction prices is difficult to secure from traders, bid and ask levels are generally known by the trade, and the trade press normally reports a range of price quotes for the day.

Table 6

Average Crude Oil Cost, Refiners' Margin, Wholesale Price* of Gasoline (1976–1983)

	1976	1977	1978	1979	1980	1981	1982	1983^e
Average Crude Oil Acquisition Cost ($/bbl.)	10.98	11.96	12.46	17.72	28.07	35.28	31.90	29.00
Average Gross Refiner Margin								
¢/gal.	9.9	9.6	10.8	20.2	24.2	17.8	17.3	16.0
% over crude	38.2	33.7	36.4	47.9	36.2	21.2	22.7	23.1
Average Wholesale Price* (¢/gal.)	35.8	38.1	40.5	62.4	91.0	101.8	93.2	85.0

e = Estimated

* National average wholesale price for regular leaded gasoline as reported by DOE.

Source: U.S. Department of Energy Statistics.

The futures market is essentially a standardization and extension of the spot market forward in time. Like the spot market, prices freely fluctuate, reflecting the market's net assessment of future price levels at any point in time. Unlike the spot market, futures prices reflect actual transaction prices, not simply bids and offers. Moreover, the long and short parties remain anonymous unless they stand for delivery.

The futures trader should utilize information provided by all three wholesale markets in guiding his trading decision. For example, the direction and magnitude of the difference between spot (and futures) prices and contract prices provides an indication of whether refiner margins are likely to be squeezed or expanded. Fundamental supply and demand relationships, as well as price pressures signalled in the crude oil market should be utilized in price forecasting and trade timing.

Spread Trading

For the spread trader, or for that matter any trader interested in interproduct price relationships, both seasonal and longer term supply and demand forces should enter the trade decision. Because the interproduct basis changes constantly, history alone does not provide sufficient information. As refinery product mix varies, and as product treatment capabilities and demand patterns adjust, the price basis will also change. Most unpredictable is the price spread between No. 2 heating oil and regular leaded gasoline. Clearly, substantial speculative opportunities exist between these two contracts. Moreover, a physical trader in both commodities can improve his net competitive position in the two markets by taking an interproduct spread.

Other petroleum products can be hedged as well by utilizing the heating oil and regular gasoline contracts. However, caution is recommended. Diesel fuel displays the physical characteristics of heating oil, but the consumption pattern of gasoline. Either, or both, of these markets could be used to hedge diesel fuel if a proper margin of error for the price basis is taken into consideration. Similarly, other light products such as kerosene, jet fuel and aviation gasoline could be hedged utilizing a conservative hedging strategy. Together, distillate fuels and gasoline compose roughly two-thirds of the barrel of crude oil. Therefore, a combination of the two markets as a longer term hedge against the price of crude oil offers a major opportunity to both refiners and producers of crude oil. With crude oil futures now trading, spreading of products against crude oil has become a popular trading technique. Since crude oil only has a value relative to the prices of petroleum products, the market price of crude oil can be assessed against that imputed value. As such, the marketplace affords the opportunity to buy (sell) crude futures and sell (buy) product futures when these appear out of line with each other.

Conclusion

In today's oil market, and increasingly into the future, no single group can exercise primary control over oil prices. The major international oil companies, the "Seven Sisters," are today arm's length buyers of crude oil from sovereign governments overseas. As such, these nations play the critical role in setting prices, as witnessed by the rise of the Organization of Petroleum Exporting Countries. (OPEC).

Nonetheless, because of substantial excess oil producing capacity, these nations will, on the margin, break their cartel ranks and sell oil at less than official prices. As a result, spot markets have grown and prices have become highly volatile. In the United States, competition among oil companies, large and small, also serves to keep spot prices highly volatile. Because of these institutional changes, the industry now incurs substantially greater price risks than in the past.

Hence, the development of futures markets and the opportunity for risk reduction through hedging. Combined with conventional technical analysis, and the knowledge of various arbitrage possibilities, petroleum futures markets are likely to become a major market for professional commodity traders and for oil companies both large and small. As such, they will likely set the standard for oil pricing in the 1980's.

UNDERSTANDING THE ALUMINUM FUTURES MARKET

BY ARNOLD BRISK

The year is 1942—and one of those cold, foggy nights on Long Island. Suddenly, just off a remote section of beach, a Nazi U-boat surfaces and four German frogmen wade ashore. Armed with the latest explosives, they move silently toward their mission—crippling America's burgeoning air armada.

Their target—aluminum smelters. Their plan—destroy the power lines carrying electricity to the smelters. Before power could be restored, the molten metal would solidify in the furnaces. Only blasting could remove it, and that would knock out the smelter. But the plan failed. Before the enemy agents could strike, J. Edgar Hoover's crack FBI agents intercepted them.

While this sounds like a movie script, it's not. The *National Geographic* chronicled the bizarre plot. Yet the lesson is clear: the light, bright metal everybody thought was principally for pots and pans had become an important building block of our industrial society.

Development of the Aluminum Industry

Every period of man's evolution has taken its name from the mineral that dominated day-to-day life. The cave man wandered out of his shelter and grew more sophisticated as he passed through the stone age, bronze age and iron age. The latest progression—indeed the post World War II era—can justifiably be called the Aluminum age. Aluminum's versatility has practically hurtled society from one technological triumph to another. More than any other material its characteristics are conducive to great growth. In its purest form, aluminum is soft enough to whittle. Yet, when alloyed with other metals, it has the strength of the highest quality steel, but only one-third the weight.

In fact, its versatility is astonishing. An airport firefighter wearing an aluminum coated asbestos suit can battle the blaze at a comparatively comfortable 95 degrees inside while flames surrounding him are 2000 degrees. Farmers know cows give more milk when the animals are cool and comfortable, so they nail reflective roofs of aluminum on their dairy sheds.

Look around. Aluminum clads houses, campers, factories, and office buildings. It is used in automobiles, trucks, ships, airplanes and aerospace vehicles. Aluminum transmits electricity. Of course, let's not overlook its impact on our lifestyle: we stretch out on aluminum chaise lounges, swing aluminum bats at Sunday softball games, hoist aluminum beer cans to quench our thirst.

Aluminum is the oldest of materials, yet the most modern. While crude aluminum salts were known to be used before the birth of Christ, the metal was not isolated until 1825. It was not commercially produced in quantity until 1888.

Potters in Iraq were fashioning pottery from a clay consisting largely of a compound containing aluminum as early as 5000 BC. In 3000 BC, the Egyptians and Babylonians were using aluminum compounds in various medicines. Pliny, the Roman naturalist and writer who lived from 23–79 AD spoke frequently of *alumen*, now known as alum, an aluminum compound widely used in ancient and medieval times to fix textile dyes. But it was not until the 18th century that the earthy-based "alumina" was recognized as a source of metal.

In 1807, the British chemist, Sir Humphrey Davy, tried to extract the metal from its earthy ore base. He was unsuccessful, but was convinced that alumina was metallic and he named the metal-to-be "aluminm" which he later changed to "aluminum." The name is still used in the United States, but the metal is called "aluminium" in many other countries.

In 1825, Hans Christian Orsted, a Danish physicist and chemist, was able to produce metallic aluminum. His notes referred to it as ". . . a lump of metal which in color and luster somewhat resembles tin." In 1845, Friedrich Wohler, a German physicist, produced metallic aluminum particles the size of pinheads. He was the first to discover aluminum's properties: specific gravity, color, ductility, etc.

Nine years passed before anyone could produce metallic aluminum in a form larger than Wohler's pinheads. In 1854, Henri Sainte-Claire Deville, a French scientist, developed the process that allowed the pinheads to coalesce in marble-sized lumps. Deville's process became the foundation of today's aluminum industry. One year later, 1855, aluminum bars were produced and exhibited at the Paris Exposition. The new metal was introduced to the world.

At that time, scientists knew enough about the properties and qualities of aluminum to realize there was a shiny future for the new white metal. Unfortunately the cost of the chemical processing procedure was virtually prohibitive. Thus, widespread use of aluminum was expensive and impractical. But by the late 1800s, two totally separate breakthroughs rescued aluminum from the laboratory.

First, the dynamo was invented. This created a large power source for electrolysis (the production of chemical change by the introduction of an electric current) so the metal could be separated from its earthy compound *sodium aluminum chloride*. Second, the Deville process was improved.

Modern electrolytic aluminum production methods were discovered in 1886 simultaneously and independently by Charles Hall of the U.S. and Paul-Louis-Toussaint Heroult of France. (An odd side note: both men were born in 1863 and both died in 1914.) The Hall-Heroult process remains the basis of today's aluminum industry

Briefly, aluminum is produced as follows:

> Purified alumina is first dissolved in molten cryolite and electrolyzed (broken down) by direct electric current. In this electrically charged solution, the oxygen of the alumina is freed, deposited on an anode and immediately released as carbon dioxide. Then the molten remainder—metallic aluminum—which is far heavier than the cryolite, falls to the bottom of the cell and is deposited on a carbon lining.

Hall recognized the value and importance of his discovery, applied for a U.S. patent and worked feverishly to improve the process. Heroult applied for a French patent, but he neither grasped the significance of the process nor the potential of its development.

In 1888, Karl Joseph Bayer, a German chemist, discovered a new method for making pure aluminum from low silica bauxite ores.

Also in 1888, Hall and a small group of investors formed the Pittsburgh Reduction Company. Demand for aluminum grew and a larger, more modern plant was built at New Kensington, Pennsylvania. By 1894 the plant produced one ton of refined aluminum per day. The need for plentiful, low cost electric power led the young company to Niagara Falls. When the plant was finished in 1895 it became the first customer of the new Niagara Falls power generating facility. By turn of the century the demand for aluminum exceeded the most optimistic expectations. In 1907, Pittsburgh Reduction changed its name to Aluminum Company of America (ALCOA). Until World War II ALCOA was the sole U.S. producer of primary aluminum.

Industrial development in Europe followed a similar pattern. To capitalize on cheap hydroelectric power Heroult built an aluminum production facility at Newhausen, Switzerland, near the great falls of the Rhine. The British Aluminum Company, formed in 1894, recognized the abundance of inexpensive hydroelectric power in Norway and built an aluminum works at Stongfjurden in 1907. Another facility was built in France near Grenoble in 1888. Germany produced little aluminum until World War II, when demand became urgent and several smelters were built using electricity generated by steam power. By 1940, Japan, Sweden and Yugoslavia were also producing the white metal. Not until after the War, did Russia begin producing large quantities of aluminum in their Ural industrial complexes.

Aluminum had come of age: from obscurity as a mere element in clay to wonder metal of the 20th century. The civilized world has adopted aluminum as an essential element of progress.

From Mine to Finished Product

Aluminum's journey from the mine to finished product is a fascinating little-understood story. But first, an historical perspective.

Rock with 52% aluminum oxide was discovered in quantity in the early 1800s near Les Baux, France. Known as Bauxite, it is an ore consisting largely of aluminum in the form of hydrated oxide.

Bauxite varies in physical appearance and form. It ranges in color from off-white to pink, to grey and even to red or brown if there is a high iron oxide content. It may be earthy, rocky or clay and is found on all continents except Antarctica. The richest deposits lay in areas that were tropical and subtropical climates during formation. Essentially world reserves of bauxite are inexhaustible. Massive deposits are found in Jamaica, Australia, Brazil and Africa. Ironically, the world's super powers, United States and Russia, have relatively minor reserves of quality bauxite ore.

The largest quantity of commercially exploitable bauxite ore lies at the earth surface. It is mined open pit fashion, little cover dirt and rock need be removed. The bauxite beds are dynamited, then the blasted-loose ore is dug up with giant power shovels on drag lines. The ore is trucked or railed to nearby processing plants where it is crushed, washed free of clay and dirt, kiln-dried and pulverized. Now it's ready for refining.

Some 90 percent of bauxite is prepared this way for refining into alumina, which is smelted into aluminum. The remaining 10 percent is used in other applications such as abrasives, refractories and petroleum catalysts. Four to five metric tons of bauxite produce one metric ton of aluminum metal.

Producing aluminum from bauxite is a two-step process: refining bauxite to obtain alumina, then smelting alumina to get aluminum. The Bayer process, with some updated modifications is still the most widely used refining method. It involves four procedures: digestion, clarification, precipitation, calcination.

In the first step, bauxite is ground and dumped into a caustic soda solution, then pumped into large pressurized tanks called digestors. The ore is dissolved under steam heat and pressure. The caustic soda reacts with the ore's hydrated aluminum oxide to form sodium aluminate. The remainder is an insoluble, impure sludge called "red mud" by refiners owing to its iron oxide content.

During the clarification process the entire mixture passes through a series of tanks and filter presses. The filters catch the red mud and discard it. The resultant green liquid becomes clarified.

The clarified liquid is pumped into tall silo-like precipitators. Large quantities of hydrated alumina crystals are added to the solution as seeding to cause crystal separation. The seed crystals attract other crystals to form crystal clusters heavy enough to be filtered out of the solution.

In the final refining process, calcination, the crystal clusters are washed to remove impurities, then heated in long rotary kilns at temperatures in excess of 1800°F. Pure water and water/chemical combination are driven out leaving pure alumina—a dry, white crystal powder similar to sugar in consistency and appearance. Chemically, it is still half aluminum and half oxygen, bonded so tightly that neither chemical alone nor heat alone can separate the two. It is done by a complicated smelting process.

In a modern smelter, alumina is dissolved by placing it in smelting cells (deep steel pots lined with carbon) already filled with a molten electrolytic conductor consisting of aluminum compound called cryolite. By means of carbon electrodes, direct current is passed through the electrolyte to the bottom of the pot. This causes the surface of the molten bath to crust. Alumina is put on top of the crust where it is prewarmed by the heat from the molten mixture below. At predetermined intervals, the crust is broken and the alumina is stirred into the bath.

The chemical process which separates alumina from oxygen in the bath and electrolytically decomposes it is beyond the scope of this article. However, the end result is molten metallic aluminum on the bottom of the pot. The oxygen then combines with the carbon and escapes as carbon dioxide.

The smelting process is continuous. Heat generated by the electrical current keeps the bath molten so the added alumina is melted. Periodically molten aluminum is siphoned into large crucibles. The metal may then be poured directly into foundry ingot or it may be transferred to holding furnaces for alloying with other metals. As it comes from the cells it is 99.8% pure.

In actuality, long rows of smelting cells, called pot lines, are electrically connected. Each cell requires 4 to 6 volts and an electric current ranging from 50,000 to 150,000 amps. Fifty to 150 cells may form a single potline, with total line voltage up to 750 volts. This explains why smelters are located near power sources and why power is one of the most costly ingredients in the price of aluminum.

While commodity traders aren't metallurgists, it is important for all market participants to have some understanding of aluminum alloys and their respective uses. Since relatively little aluminum is consumed in its purest form, alloys are made up for specific end uses. At times, there can be a shortage of a particular alloy, yet an abundance of aluminum.

Super-pure aluminum (99.99%) is formable, weldable, corrosion resistant and is a superior conductor of electricity. It can be used for chemical equipment, artistic purposes, electrical components, reflectors and as a catalyst in making particular products. However, most aluminum used is alloyed with other metals to improve its properties for specific uses. While most metallic elements easily alloy with aluminum, only a few created the desired alloys for commercial uses. They are copper, manganese, magnesium, silicon and zinc. Other metals that are added in small quantities to meet a particular function include bismuth, boron, cadmium, chromium, cobalt, lead, nickel, sodium, tin, titanium, vanadium, and zirconium.

When heat treated, aluminum-copper alloys have good ductility and machineability and, in many ways have mechanical properties superior to those of mild steel. They are ideal for screw machine products, structural applications, and aircraft components. They are not suited for applications requiring corrosion resistance or weldability.

Aluminum-manganese alloys are used for cooking utensils, storage tanks, highway signs, roofing and siding, and heat exchangers. By adding some silicon (about 10 percent), the alloy becomes suited for welding and brazing. If some magnesium (about 5 percent) is added, the alloy is stronger, more corrosive resistant and can be used for marine purposes.

Aluminum-zinc alloys have great hardness and strength. Additions of small quantities of magnesium, copper, and chromium produce the alloys used in aircraft structures and mobile equipment.

Other metals may be added to the basic alloys for specific purposes. Bismuth, lead and tin make the alloy easier to machine; boron increases electrical conductivity; nickel increases strength; titanium refines the metal's grain, resulting in greater ductility.

Certain metals improve the casting qualities of aluminum. Silicon improves the fluidity of molten aluminum allowing it to flow more easily into a mold. Copper is sometimes added as a hardening agent. Magnesium improves corrosion resistance and makes aluminum easier to machine. Nickel improves dimensional stability.

While it's called the magic metal, aluminum is also referred to as the *obliging metal* because it can be fabricated by all known metal-working techniques.

CASTING: Casting is the process where white hot molten, 1300°F, aluminum is poured or forced under pressure into a mold. As the metal cools, it takes shape. Different types of molds are utilized. In sand casting, expendable sand molds are formed around a shape, used for molding, then discarded. The process is used for large shapes and small quantities. Plaster casting, a refinement of sand casting, provides a smoother finish and better dimensional control. Permanent casting utilizes metal molds and cores which are used thousands of times to produce smooth-surfaced, superior strength products.

Die casting is when molten metal is injected into water-cooled steel dies at pressures up to 20,000 lbs. per square inch. This method is preferred for long production runs requiring good finishes, strength and dimensional accuracy.

ROLLING: In rolling, aluminum ingot is reduced by passing it through a series of rollers. First, rolling ingot, which may be up to 30 feet long, 36 inches wide and 20 inches thick, moves through a scalper that trims and smoothes edges and surfaces. The ingot is heated and, in a series of successive passes through rollers, it is rolled down to plate size. Cold rolling further reduces the ingot to sheet.

FORGING: In forging, ingots are heated, then pounded into desired shape by hydraulic hammers, or pressure in a press. Drop forging occurs when a single hammer blow forces the metal into a die cavity. Press forging uses a fast push, rather than a blow, to force the metal into a die. Dies are usually alloy steel blocks.

DRAWING: Drawing is where metal is pressed into a hole or cavity. The metal retains the shape of the opening. In cold drawing, a pointed length of rod is pulled through a die orifice that has a smaller diameter than that of the rod. Wire is made by drawing the metal through a successive series of smaller dies orifices until the desired gauge is reached.

EXTRUDING: Extruding is the process whereby a hydraulic ram forces a heated ingot through the orifice in a die. The metal takes the shape of the orifice and is cut to length. Size and shape is limited only by the power of the ram and the size of the die. Extruded shapes can be solid, semi-hollow and hollow. Extruding differs from drawing in that the shapes are larger.

OTHER FABRICATIONS: Other techniques used are spinning, stamping, bending and coining.

Consumption Patterns

Aluminum consumption patterns mirror our sharp population growth, seemingly insatiable appetite for consumer goods and technological advances.

The quantum surge in aluminum's usage since World War II is due to the ease with which it can be substituted for copper in the electrical industry, for glass bottles and tin cans in the packaging industry, for zinc in the automobile industry as well as for other materials in a host of other industries.

Usage—Major Markets
United States
1982

Packaging	29.4%
Construction	18.8%
Transportation	14.4%
Exports	10.7%
Electrical	9.3%
Consumer durables	6.4%
Misc.	5.6%

Source: The Aluminum Association

Aluminum is desirable because of its properties: strength, low specific density, high melting point, conductivity (thermal and electrical) and corrosion resistance.

PACKAGING: About 22 years ago Reynolds Metals Company introduced a 12 oz. aluminum beverage can. Today, these cans represent the dominant marketing container for beer and soft drinks. Aluminum is the definitive material for this type packaging due to its formability, corrosion resistance, inert behavior toward the contents (outward pressure from carbonation) and strength. Aluminum beverage cans have reached the saturation limit of the beverage can market.

Alcoa and Continental Can are now jointly introducing a new food can. A new electrophoric coating process anodizes each can with a uniform corrosion resistant finish. The new cans cost less than tin cans and are lighter. These new cans represent a minor share of the market now, but will probably exceed 60 percent by the year 2000.

An advantage of aluminum cans is that they can be recycled quickly and save 95 percent of the energy required to produce primary aluminum from bauxite.

Additional packaging applications in the future could expand. If consumer tastes for fast, easy precooked meals increases there would be demand for foil-wrapped frozen, pre-cooked, dehydrated and pouch food.

Another important packaging use is foil, usually in the form of foil-paper laminate. This provides a nonrigid container for cigarettes, coffee, candy and other snacks.

Major competitive threats come to aluminum from glass and plastic in the can area and other metallized-paper laminate in the foil area. Based on present day technology aluminum is superior and probably would only be replaced on a cost basis.

TRANSPORTATION: Transportation includes everything from bicycles to the space shuttle. But it is the worldwide automobile industry that consumes the most aluminum.

Aluminum entered the transportation field as casting made of secondary metal, alloyed for specific applications. It replaced cast iron and die-cast zinc cylinder heads, intake manifolds, brake drums and door knobs. Aluminum is now becoming a key material in external parts such as bumpers, and for structural uses such as drivetrains. The typical American automobile contains between 120 and 150 lbs. of aluminum with the Corvette taking the prize—375 lbs.

The obvious advantage is weight saving, but it is a double advantage. The use of aluminum alloys reduces a component's weight which in turn reduces the weight need for supporting structures. That is to say, a lighter engine and drivetrain can be supported by a lighter chassis. A lighter car is more fuel efficient.

The aluminum and aerospace industry grew up and matured together. A whole spectrum of alloys have evolved for specific aircraft application. Competitively priced, they provide the right combination of strength, fracture toughness, corrosion resistance, fatigue resistance and other desirable metallurgical requirements.

Two new alloy forms are gaining popularity in the aerospace industry. The first is powder alloy. These are metals blended into a molten mass then powderized by "quenching," injecting it into water or gas, where it solidifies as powder. The final product is made by compressing the powder. Powder alloys have improved strength, fatigue and corrosion resistance. The second is an aluminum-lithium alloy. It has a high resistance to bending and is less dense.

The long term outlook for the military aircraft sector appears promising, starting with a boost from the Falklands. The Middle East wars, the Grenada invasion, and the Reagan administration's military plans, auger for increased aircraft requirements.

While total current aluminum consumption for the space shuttle is rather small in the overall scheme of things, the vehicle is an aluminum consumer. The figures are interesting. The shuttle, contains over 100,000 lbs. of aluminum plate, consumes 300,000 lbs. of aluminum powder as fuel and requires a new 77,000 lb. fuel tank for each flight. For the space mission aluminum has "the right stuff."

Aluminum is also used for ships, railroads, urban transit systems and trucks. Weight again is the prime appeal.

BUILDING AND CONSTRUCTION: The construction industry uses aluminum mainly for window frames, sliding doors, rain gutters, flashing and siding but not for structural support functions. Competing materials include wood, plastic, steel and copper. Alternative materials are easily used and aluminum is susceptible to substitution should its price get out of line. Building and construction consumes about 19 percent of U.S. aluminum but in Japan the figure is 30 percent. This comes about from the difference in climate and culture.

The energy crisis of the 1970s increased aluminum's use in applications such as insulation, solar collectors and heat exchangers. This growth was stymied by the recession but could get back on course if promoted by government and/or industry.

The future of this sector is rather cloudy. The use of improved competing products such as particle board and plastic could negatively impact demand for aluminum for onsite and modular housing. On the other hand the need for energy conservation could increase demand of solar systems, storm windows and similar energy-saving items.

ELECTRICAL: This is the one area where aluminum and copper compete head on. Aluminum and copper are the only viable materials for electricity transmission. Their use depends on price versus electrical conductivity in a specific application. Copper is still the winner. Aluminum is substituted for copper when copper prices are one and three quarter times higher than aluminum.

Aluminum appears to be replacing copper in the area of high voltage overhead transmission lines. Light weight and ease of maintenance is the advantage. Also, aluminum has an application for towers to support the power line. Aluminum is also replacing copper in covered wire and cables.

However, copper is leading aluminum for home and office wiring. This comes about from copper's superior conductivity and there is a safety factor where thin wiring is utilized. Thin aluminum wiring tends to develop hotspots which have the nasty habit of causing fires—a most undesirable situation.

CONSUMER AND OTHER ITEMS. This is the all-encompassing category. It includes aluminum metal used in appliances, sheet aluminum used in industry as well as aluminum used for machinery and equipment. Pure aluminum particles in powder are used in paint, explosives, cements, and as rocket fuel. A non-metal use is tubular alumina, aluminum crystals heated to over 3,000°F. At high temperatures it has strength and chemical stability. For this reason it makes an excellent refractory, material used for lining industrial furnaces.

Determining Supply and Demand

SUPPLY: Total aluminum supplies are made up of three components; production, stocks and secondary material. Data on domestic primary production is collected and published by the U.S. Bureau of Mines and is available free of charge through its monthly publication, *Mineral Industry Survey* (Aluminum). Data on free world production is collected and published by *The American Bureau of Metal Statistics* (ABMS).

With copper, as opposed to aluminum, production rates are only important on a long-term basis because mine output remains unresponsive to short and intermediate term demand changes. Completely closing down and later reopening a mine is extremely costly. Also, in some producing countries, copper production is state-owned, and many of these nations are so dependent on copper exports for foreign exchange they must continue mining and exporting, even at prices below production cost. But this isn't true with aluminum.

Third world countries produce over a half of the Western world's bauxite, a quarter of its alumina but less than 20 percent of its aluminum. Therefore, should an economic slump develop, backing up will take place and producers of aluminum may simply slow down production, even though bauxite mining may not be curtailed to the same extent. This happened in the recent recession; copper dropped to low price levels while aluminum prices remained high and even surpassed copper prices.

Increases or decreases in consumption immediately impact inventory levels but only affect production output if sustained. Aluminum prices therefore, tend to be a function of the ratio of demand to inventories.

Inventories accumulate at three distinct points: producers, mills-foundries-manufacturers, exchange warehouses.

Primary producers sell their aluminum to mills and foundries, either other companies or their own subsidiaries, to form unfinished products such as can stock, sheet wire, extruded products. These items, called mill products by statistical reporting services, are sold to manufacturers who make the ultimate product. The inventories held by primary producers, semi-fabricators and manufacturing consumers are difficult to determine. You can get "ballpark estimates" from news dispatches, periodicals, trade group publications and brokerage house reports.

Exchange certificated stocks are the barometer of inventory levels, the bellows in the industry pipeline. They represent a terminal market for producers and a facility to hold excessive stocks. A continual buildup indicates an oversupply due to lack of demand. A prolonged draw-down reveals a tight supply situation caused by increased industrial and/or speculative demand.

COMEX (Commodity Exchange, Inc.) warehouse figures are issued daily and published by most financial news services. LME (London Metal Exchange) figures are released every Monday morning and are also reported by most financial news services.

Secondary supplies of aluminum must not be overlooked. They are recycled and represent one-third of aluminum usage. Statistics on secondary aluminum inventories in various forms are gathered and published by the U.S. Bureau of Mines in their previously mentioned MIS (aluminum) publication.

World Primary Production
(1982)

North America	33%
Europe	25%
Eastern Bloc*	19%
Asia	10%
South America	6%
All Other	7%

Source: U.S. Bureau of Mines
*Estimate

DEMAND: It is difficult to predict consumption by extrapolating *per capita* usage. Much of the population in underdeveloped countries lives outside the money economy on an agricultural subsistence level. In developed Western countries, the ratio of older to younger people is increased due to medical science and a lower birth rate. These trends will alter past *per capita* consumption patterns. The most effective way this writer knows to predict consumption levels is to study the level of industrial activity in the four major industrial Western economies: U.S., Japan, West Germany, Great Britain.

World Primary Consumption
(1982)

North America	28%
Europe	26%
Eastern Bloc*	24%
Asia	17%
South America	2%
All Other	3%

Source: U.S. Bureau of Mines
*Estimate

The overall U.S. economy can be monitored by watching Gross National Product figures, but analyzing specific patterns takes a detailed examination. A more direct barometer of industrial activity is the manufacturing industry component of the Industrial Production Index, released on or about the fifteenth of each month by the Federal Reserve Board. This index tends to be a leading indicator of aluminum usage. The exact lead time varies but is roughly two to three months. The Commerce Department's Index of Leading Economic Indicators, a fairly reliable index composed of 12 series, should also be studied. It is released near the 27th of each month.

There are three other broad-based indicators that merit tracking. First, The Bureau of Labor Statistics' monthly report on Real Earnings, released toward the end of each month. The two others are issued by the Census Bureau: Housing Starts, mid-month; New Home Sales, end of month.

One of the best yardsticks to gauge the current status of the economy is the Commerce Department's Composite Index of Coincidental Indicators, released around the 29th of each month. When extrapolated backwards, it seems to track the economy remarkably well.

The largest single user of aluminum is the packaging industry, consuming about 30 percent of aluminum production. The foregoing indicators should provide enough guidance to gauge industry trends. Construction, which accounts for about 19 percent of aluminum usage, can be monitored more closely by following New Construction Activity, a report released about the third of each month by the Census Bureau. Transportation, about 14% of aluminum usage, is best studied by following the Transportation Equipment component of the Industrial Production Index. Finally, electrical equipment, about 10 percent of aluminum usage, can be monitored by logging Electric Machinery, also a component of the Industrial Production Index.

Actual domestic usage statistics are reported monthly in the Bureau of Mines' MIS for aluminum. However the figures are published about two months after the reporting time period.

Another demand factor difficult to analyze is speculative demand. A speculator used to be considered an individual outside the trade who thought he had a chance to make a "quick buck." In recent years, the definition of speculator has had to be expanded to include investors looking to tangibles as an alternative to traditional investments. Also, many companies which use aluminum as a raw material sometimes enter the market as *anticipatory hedgers*. In other words they buy futures beyond their actual needs in anticipation of a price rise. This inventory buildup is a form of speculation. The combined speculative buying from these sources makes bull markets exaggerated affairs. Excessive speculation is sometimes hard to gauge but can be monitored by watching the "bullish consensus," a statistical count of the bullish sentiment as compiled from brokerage house literature. It is compiled, published and released each Tuesday afternoon by *Market Vane*, a Pasadena, California publishing company.

Since aluminum is truly an international commodity, the level of economic activity in other industrial countries should also be continually followed.

The same leading indicators of aluminum consumption can be followed for Japan, West Germany and Great Britian. Gathering the details is much more cumbersome than collecting U.S. figures. One readily available source, however, is the *CRU Metal Monitor* (aluminum), published monthly by Commodities Research Unit Limited of London.

Sources of Statistical Information

There are many sources of basic fundamental information. This writer has found the following publications to be the most useful and timely.

ANNUAL

Commodity Year Book, Commodity Research Bureau, Inc., 75 Montgomery Street, Jersey City, New Jersey 07302.

Metal Statistics, American Metal Market (Fairchild Publications, Inc.) 7 East 12th Street, New York, New York 10003

Mineral Industry Survey—Aluminum (annual issue and annual preliminary issue), U.S. Bureau of Mines, Washington, D.C. 20241

Yearbook (Non-ferrous Metals), American Bureau of Metal Statistics, 420 Lexington Avenue, New York, New York 10017

MONTHLY

CRU Metal Monitor (Aluminum), Commodities Research Unit, Ltd., 31 Mount Pleasant, London WC1 XOAD

Mineral Industry Survey—-Aluminum, U.S. Bureau of Mines, Washington, D.C. 20241

WEEKLY

Metals Week (McGraw-Hill, Inc.) 1221 Avenue of the Americas, New York, New York 10020

Metal Bulletin (Metal Bulletin, Inc.) 708 Third Avenue, New York, New York 10017

DAILY

American Metal Market (Fairchild Publications, Inc.), East 12th Street, New York, New York 10003

There is the problem of becoming too involved with the equations and nuances of supply/demand statistics, especially in active markets. During these times, speculative fever takes over and it becomes impossible to project a realistic price level based on supply/demand statistics. Traders should also use technical analysis and risk/reward common sense.

The Primary Aluminum Industry

Before World War II, aluminum production was just under 1.0 million metric tons a year. The bulk was produced and controlled by Alcan, Alcoa, and a couple of other large scale producers. Capital requirements needed to develop large, economically efficient bauxite mines with on-site refining and smelting capabilities were so great new companies couldn't scale the entry barrier. These large producers had the capital to build refining and smelting facilities, and to maintain their own mills and fabricating facilities. In addition, they established tight ties with end-consumers. They integrated vertically upstream by taking a "piece of the action" in mine projects and power development. In recent years, the industry has had a facelift.

A number of off-site independent smelters have broken the vertical integration pattern. Built mainly in the Western countries, often with government support, they buy alumina, process it, then sell primary aluminum on the open market. The rise of these independents spurred the success of the LME aluminum contract because it provided a terminal market and a hedging mechanism. It may also ensure the success of Comex's new aluminum contract.

Despite expansion of independent producers, six "majors" still have tremendous influence on the aluminum industry. They are Alcan (Canadian), Alcoa (U.S.), Alusuisse (Switzerland), Kaiser Aluminum & Chemical Corporation (U.S.), Pechiney (France), Reynolds Metals Company (U.S.).

How the Industry Prices Aluminum

Aluminum pricing appears complicated to the layman but is actually quite straight-forward:

PRODUCER PRICING: Prior to World War II aluminum was still thought of as a minor metal, the amount of aluminum produced annually was minor compared to copper's production figures.

At that time the major producers, controlling production at all stages, arbitrarily set the price of the refined output. This is referred to as the "producer price." In this highly developed oligopoly, producers usually set the same price, however, there were times when individual producers set slightly different prices. This is referred to as a *split producer price.*

The producer price is not based on immediate supply/demand factors, but rather set as a long range equilibrium price designed to assure a relatively stable price to consumers.

Producers determine their respective prices by evaluating mining costs, refining and smelting costs, profit margins and then arriving at a price that will not encourage consumers to consider competitive materials. The producer price is the last to rise in a bull market and also the last to decline in a bear market. The producer pricing system worked fairly well until the late 1970s.

MERCHANT PRICING: Metal merchants buy and sell outside the producer market. Secondary smelters, excess manufacturer inventories and independent refiners are their main supply source. The outlets are mills and manufacturers who are caught short of material and cannot get more from the producer(s) they normally buy from, or they need it quicker than producers can deliver.

Merchants do not invest in production facilities but in inventories. They're busiest when aluminum demand is highest and the prevailing price is well above producer price.

In many respects, the merchant market is similar to the over-the-counter securities market. Buyers phone merchants, describe their needs—quantity, quality, delivery date and location, then wait for the merchants to phone back with a price quotation. Obviously the merchant with the lowest price gets the order. Corporations with excessive supplies can just as easily sell to merchants.

As aluminum consumption developed in the 1950s and 1960s, the merchant business became more profitable, yet the producers ignored the merchants and continued to operate under the fixed producer pricing system. By the 1970s a well developed two-tier pricing system was in full force. But, the amount of metal produced since the end of World War II increased ten-fold, secondary production had become a major market factor and third world countries were starting their own smelting operations. As a result of these greater pressures and increased volatility of the market place, a new market was needed, a futures market. In 1978, an aluminum futures contract was introduced on the London Metal Exchange.

London Metal Exchange

There are now two aluminum futures markets: London Metal Exchange (LME) and Commodity Exchange, Inc. (COMEX) in New York. Both exchanges provide a terminal market for excessive material and a price-in-time hedging mechanism.

When the LME first proposed trading aluminum in late 1977—early 1978, industry leaders rejected the idea, complaining that the exchange was a "gambling casino." The main complaint came not from the six large integrated producers as might be expected, but rather from independent consumers. They had reason for alarm.

At that time there was an acute shortage of material, causing LME exchange prices to rise above producer prices. This meant that producer-owned mills secured material at the producer price while independently owned mills had to pay the higher merchant price. In previous times, free-market trading was confined to merchants who looked after their customers and were more flexible. But in the fall and winter of 1978, merchants expected to receive an LME related price. If customers didn't want to pay it, then the merchants had the alternative of using the LME as a terminal market.

The LME also had a problem of its own. From the exchange's point of view the great concern was that prices might be distorted by a lack of material in exchange warehouses. Since most of the aluminum supplies were controlled by producers, it was thought that artificial shortages might starve the exchange. For this reason, contract specifications called for low quality aluminum. Inventories were supplied at first by Communist bloc countries.

At first, aluminum trading was conducted by a limited number of traders dealing with floating supplies. But now the LME plays an extremely important pricing role in the metal industry, similar to that of copper.

Aluminum trading on the LME starts daily at 11:55 A.M. London time (6:55 A.M. New York time) with members seated in a circle called the "Ring." They shout their bids and offers across and around the ring for exactly 5 minutes, after which time trading is concluded. Each of seven metals (copper, lead, tin, zinc, silver, aluminum and nickel) is traded in this manner. This is followed by a ten-minute recess so dealers may phone their respective offices. The proceedings are then repeated. However, this time copper is allocated two 5-minute periods, one for high grade and one for standard cathodes. At the end of the second call a three-member *fixing committee* meets and announces three prices for each metal: cash, three-months, and settlement price. Any exchange member may appeal if he feels the committee's prices did not reflect the session. This entire process is referred to as the first or morning session and the prices are considered official. There is also a second or afternoon session. Although the volume is often greater than the earlier session, American metalmen are already at their desks, prices are unofficial.

Prior to each session ex-ring transactions take place. They are called *pre-market* dealings. At the end of each session transactions also take place, they are referred to a *Kerb dealings, so-called because they once took place on the kerb.*

LME aluminum is quoted in pounds sterling, per metric ton while COMEX aluminum is quoted in cents per pound. To convert London prices to the U.S. equivalent use the following formula:

$$\frac{\text{LME price} \times \text{sterling exchange rate}}{\text{number of pounds in a metric ton (2204.6)}}$$

Example: Given LME) price of £1,100 per metric ton and a sterling exchange rate of 1.4400

$$\frac{1110 \times 1.4400}{2204.6} = 72.50 \text{ cents/lb.}$$

While London prices are quoted in sterling it is possible to buy or sell any listed metal in dollars.

Although quotations are published as cash and three months (the amount of time it used to take a copper-laden ship to sail from Chile to London), specific prompt dates of up to three months forward duration are traded. Longer durations are possible, usually up to seven months and in some cases one year, by negotiations. Prompt date values can be determined by extrapolation between cash and three months:

To determine specific prompt date value:

1) Subtract cash quotation from three months quotation. It doesn't matter if the figure is positive or negative. The answer is the carrying charge (or discount) for three months.
2) Divide the above figure by 90, the number of days in three months. This figure is the daily carrying charge.
3) Calculate the number of days from the current day to the prompt date.
4) Multiply the daily carrying charge (2) by the number of days (3) to compute premium or discount.
5) Add premium or discount (4) to the cash price for value of specific prompt date.

Example:

1) Given cash price of £1094 and three month price of £1122: 1122 − 1094 = 28
2) 28 ÷ 90 = .3111
3) Given current date of March 2, and prompt date of April 1, 30 days
4) .3111 × 30 = 9.333
5) 1094 + 9.333 = 1103.33

While a contango or backwardation is usually spread evenly between spot and three months, at times there are wide variations between prompt dates, sometimes even between very close dates. These price distortions come about from a concentration of hedging or speculation within a confined time period.

When placing market orders never assume there is an even distribution from prompt date to three months. Always get a quote first!

Orders are processed similarly to orders on COMEX, except that a customer must designate if his order is for the ring, the pre-market, the kerb, or to be executed at any time. It is possible to place limit orders for specific prompt dates based on the three-month price. Thus a person could direct his broker to "sell 150 metric tons of 29-day aluminum when three months hits 1122."

The LME is a principals market. Members of the exchange are responsible to each other for settlement of contracts they make between themselves. This affects traders since profits are generally not remitted until the settlement date which is also the prompt day. (Unsettled profits can however be used for margin, and in some instances brokers will remit profits in advance of settlement date but they discount the proceeds by prevailing interest rates.)

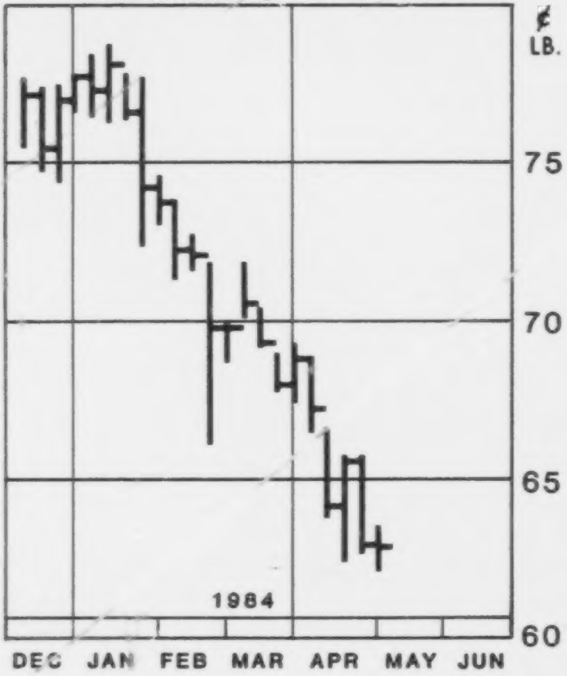
Many commercials like the principals concept for several reasons:

1. A principals market attracts large hedgers because they are not required to deposit margin. Meeting margin calls can affect their cash flow. This reflects the observation that more than 75 percent of total LME business is done by the trade, while less than 20 percent of total COMEX business is done by the trade.
2. The principals contract allows LME members to trade at any hour of the day or night. Over 70 percent of LME business is international. Members deal with overseas producers, merchants, mills and smelters whose business day starts long before or after the LME opening or closing. With around-the-clock trading, total LME volume is much larger than official ring volume indicates.
3. There are no trading limits. Prices are allowed to fluctuate freely. The London metal fraternity believes that limit moves lock-in buyers and sellers and tend to distort prices.
4. A principals contract allows transactions to be tailored to individual dates. A hedger can tie his trade to a specific lot of material, then remove the position on date of pricing.

Comex

U.S. trading in aluminum futures began December 8, 1983 on COMEX. Surprisingly, the Commodity Futures Trading Commission's public hearings receive no adverse comments or public opposition to the new contract—not even from the federal agencies which oversee aluminum as a strategic material covered by the Defense Production Act. Some newspaper accounts did report opposition by Alcoa.

COMEX officials and the brokerage community thought aluminum futures would catch on quickly and become a price-setting mechanism for the aluminum industry in the same manner financial futures became the price setter for the government bond market. First day volume was over 4,000 contracts, but within a few days, it was down to a mere few hundred contracts per day. The reason: The metal industry was unsure about the quality of the aluminum bound for COMEX certified warehouses.



ALUMINUM (COMEX) FUTURES
WEEKLY HIGH, LOW & CLOSE

The COMEX contract is based on delivery of 99.7 percent pure primary aluminum, compared with 99.5 percent on the LME. But, 99.5 percent aluminum is deliverable on COMEX at a 1¢ per lb. discount. It was feared that if the bulk of material delivered was the 99.5 percent variety (not really an acceptable commercial grade) longs would end up with a "drug on the market." However, after the deliveries were 99.7 percent, volume and interest increased.

The COMEX contract is for 40,000 lbs. the size of an ocean shipping container and a size somewhat more accommodating to industry than the LME size 25 metric tons (55,115.5 lbs.).

In accordance with COMEX rules there is a maximum daily price fluctuation referred to as a *limit*.

Trading limits were first established in the U.S. in the aftermath of a *cause celebre* scandal which caused violent price swings and a precipitous decline in grain prices in the summer of 1933. On July 20, wheat prices ranged from 90¢ to $1.00, corn from 46¢ to 64¢ and oats from 35¢ to 41¢.

These were heretofore unheard of price swings. On July 23, Secretary of Agriculture Henry Wallace ordered grain prices held above the July 20 closing price and that "fluctuations in a single day shall be limited to 5¢ for wheat with proportionate amounts for other grains." By Wall Street custom, this order, over the years, has been expanded to include most U.S. commodities. By contrast, the LME has no such limits.

On COMEX, however, there is no limit in the spot month, (current month futures contract) so traders wanting to get an order executed can simply do so in the spot month and immediately "switch" to the desired month. To a certain extent the exchange rules create the limit and also create the vehicle to escape the limit moves.

Carrying Charges

When aluminum supplies are adequate and no shortages are foreseen, distant contract months trade at higher prices than nearby contracts. This situation is called "normal" in America and a "contango" in London. The differences in price between the nearby and distant contracts is referred to as the carrying charge. It reflects the cost of holding the metal: delivery, storage, insurance and interest. The bulk of the cost is interest. When nearby contracts sell at a premium to distant contracts the situation is called "inverted," or "backwardation" in London. At any given time one of three conditions exist: (1) A full carrying charge (contango), (2) less than full carrying charges, (3) an inverted market (backwardation).

FULL CARRYING CHARGES: In a non-perishable fungible commodity such as aluminum, the premium at which a distant contract can sell over a nearby contract is limited. Should distant months start selling at prices higher than the spot price plus carrying charges, swiftly operating metal merchants, who have large credit lines at prime or call money rates, will simultaneously buy nearby contracts and sell distant contracts. These firms would simply take delivery of the nearby contracts when they become spot. Then when the month against which the metal was sold becomes spot, they would make delivery or simultaneously buy back the short and sell a more distant month short. This procedure keeps the distant contract months in line. Also, it can often be extremely profitable for the merchant/dealers. If an aluminum-shortage develops and the difference between spot and futures narrows, or the spot goes to a premium, the merchant/dealers can make a windfall profit.

LESS THAN FULL CARRYING CHARGES: Merchants, extruders, mills and foundries sometimes find it advantageous to keep extra supplies of material on hand. This is especially true when there is speculative activity in the market. Purchasing agents are not exempt from speculative fever. If enough users decide to have extra material in inventory, they must pay the price for the added benefit. As they stock up on physical metal, they force the contango to less than full carrying charges.

When this condition exists those consuming aluminum must look at the alternative savings of buying spot metal or futures contracts. For example; if the interest rate to finance a purchase is 12 percent annually and storage and insurance costs are 1 percent, full carrying charges would then be 13 percent per annum. But, if the actual contango is 11 percent, a user buying spot pays 2 percent per annum more for the privilege of having material on hand as opposed to having distant futures contracts. The user must decide if he wants to pay the extra 2 percent for the convenience.

The same type decision must be made by those processing or recycling aluminum. In this case, the decision is whether to use a faster, more costly process as opposed to a slower, cheaper process. The decision can be reached mathematically:

$$\frac{\text{Savings in cents per lb.}}{\text{Current price of alum., cents/lb.}} \times \frac{\text{Number of days in a year (use 360)}}{\text{Length of time (in days) it takes to gain lower cost processing}} = \text{Alternative Savings Yield}$$

ASSUME THE FOLLOWING: A secondary smelter has several alternative smelting processes at his disposal. The slowest process costs 6¢ less per lb. than the fastest process, but takes 90 days longer. Spot aluminum is selling at 72¢ per lb. The smelter can calculate an alternative savings yield by the formula:

$$\frac{\text{6¢/lb.}}{\text{72¢/lb.}} \times \frac{360}{90} = 3.33\%$$

The mills alternative savings yield is 3.33 percent. By using the slower process, he saves that amount as an annual percentage of the spot price.

Metalmen, especially secondary dealers and smelters, continually compare their alternatives including the use of the futures market carrying charges. In some instances, where there are less than full carrying charges, they may use a faster more costly process to produce their finished product. The faster method will allow them to make their aluminum end-product quicker, taking advantage of the less-than-normal discount nearby months sell to distant months. The decision hinges on whether the alternative savings is lesser or greater than the discount to full carrying charges currently in the futures market.

There is a tendency on the part of some commodity traders who watch contango premium relationships to conclude that the minute the contango narrows there is a shortage of material and that backwardation will follow. Historically, in LME aluminum markets, the narrowing of the carrying charge premium usually signals an alternative savings situation.

One should conclude that forward aluminum contracts do not sell at premiums to spot, but rather spot sells at a discount to forward contracts. The sum total of all aluminum producers, processors, merchants and users benefits from the choice of maintaining inventories on hand or initiating a "forward hedge."

BACKWARDATION: There is rarely a true shortage of aluminum. A scarcity of the white metal can however exist at a particular price level or point in time. If the demand for aluminum outstrips supply, the price of the nearby month goes to a premium over the distant month. This situation usually does not last too long.

If the price of the nearby month, for example, were to sell at a premium, a supply of the white metal would flow onto the market as speculators take profits by selling, and as more scrap is recycled. Simultaneously, demand would decrease; inventories would be depleted, users would switch to less costly alloys or cheaper materials. There can, however, be temporary disparities between supply and demand, dislocation of supplies or psuedo-shortages. Any one or a combination of these situations can cause backwardation. When trading during a backwardation period one must be careful not to get caught in the backwash when the market reverts to a normal market.

Importance of Scrap

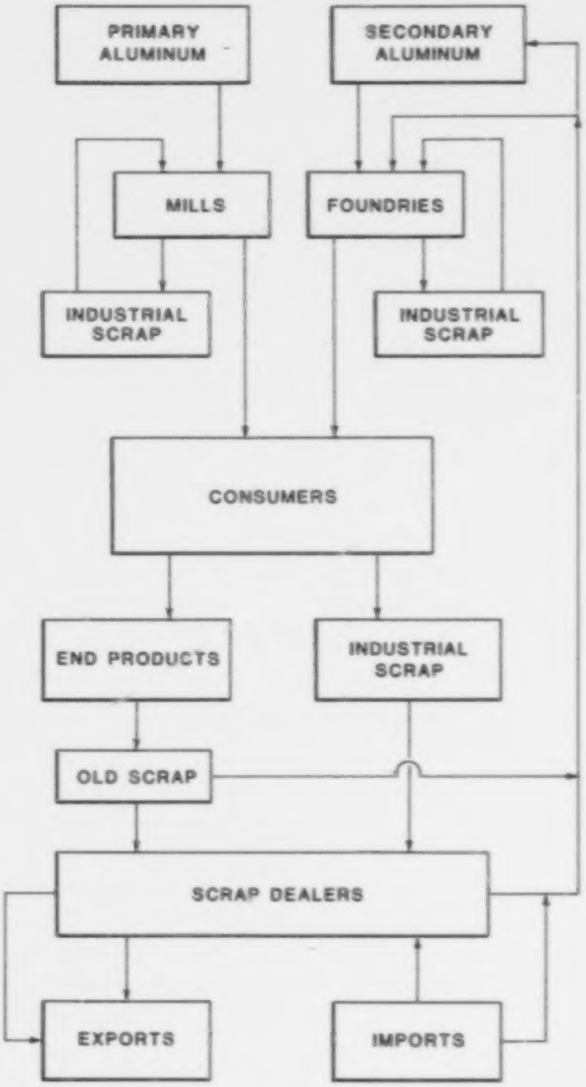
History buffs remember the old scrap peddler with his horse drawn cart buying dented pots and pans and other castoff metal. He's been replaced by modern secondary metalmen who use sophisticated systems to collect, sort and market scrap metal. Actually, the secondary aluminum industry was born at the turn of the century, just a few years after primary metal made its commercial debut. In those early years, aluminum scrap acquisition was a flyspeck industry because the supply of scrap was quite small.

Now, more than 80 years later, the same factors which caused early metalmen to recycle aluminum—low energy input needed to recycle metal back for new use and economics of location—make aluminum recycling a fascinating subject. If I were an academic futurist rather than a futures broker, aluminum recycling in the space age would be my research project for a book. In the next few years, we will see aluminum used in spacecraft recycled for new applications right in space where energy costs are extremely low because there are no gravitational forces.

The aluminum scrap industry has grown sharply since World War II. Recycled aluminum now counts for over 30 percent of total U.S. supplies and is increasing every year.

Whenever aluminum is scarce, better grades of scrap fill the void. Conversely, during periods of low consumption, scrap can be a drug on the market. Generally, scrap prices fluctuate in proportion to futures prices. Prices for lower grades vary less than higher grades because the latter have a composition similar to the refined material.

SCRAP FLOW CHART



Scrap comes in two basic forms: New and Old. New scrap consists of industrial discards such as end cuts, rejects, shavings. Old scrap items have served their intended purpose and now are obsolete or worn out. This includes beverage cans, old pots and pans, window frames from demolished buildings.

New industrial scrap must only be remelted and put back into the material flow process. It needs little preparation and has low energy requirements. In the past ten years, most aluminum consuming industries have developed programs to reprocess their own material. It is cheaper than selling the metal to a scrap dealer and buying it back in a reprocessed form such as secondary ingot.

Old scrap has turned the secondary aluminum industry into truly a growth business. Why? There is a 95 percent savings in energy costs by remelting scrap rather than processing bauxite into aluminum.

Most used scrap is collected, sorted and melted. During the molten stage, other metals are added to produce alloys. The final product is a secondary aluminum ingot produced in a variety of casting alloy. Since this casting ingot must be remelted at the manufacturing stage, a new technique has been developed in the past 25 years to save energy. Its advantage is its simplicity. Rather than cast the molten metal into ingot, it is loaded molten into sealed crucibles mounted on trucks and hauled white hot to the consuming foundry for casting. The foundry's initial expenses are higher since it costs more to deliver molten metal rather than ingot. But since the metal does not need to be remelted prior to casting, the savings on energy of 4 cents a pound offset this expense. Not surprisingly, consumers of molten aluminum locate their plants near suppliers.

Recycled beverage cans make up 75 percent of old scrap. About half of the beverage cans used are now recycled. Interestingly, Reynolds Metals which pioneered aluminum beverage cans, introduced recycling programs. Reynolds now recycles more aluminum cans than it produces from primary metal.

The price of a particular grade of scrap—new or old—is determined by the costs necessary to recycle the metal to alloy form. The differences in price between different grades of scrap do not move in tandem with futures prices and present certain hedging problems for secondary metalmen. (See hedging section.)

Strategic Stockpile

Aluminum's high strength-to-weight ratio make it an important building material in military aircraft, naval vessels, armored ground and troop transportation vehicles. The Reagan administration's emphasis on military buildup increases the tactical and strategic importance of aluminum because of U.S. dependency on foreign sources for aluminum material requirements. The U.S. reliance on imported aluminum materials is illustrated by the fact that net import is 90 percent for bauxite and 36 percent for alumina. The U.S. is 100 percent dependent on imported abrasive and premium refractory grade bauxite. Australia, China, Guinea, Guyana, Surinam are the only countries supplying these grades to the U.S.

As World War II started, the Federal government encouraged expansion of the aluminum industry to assure an adequate supply for strategic military needs. During the next 15 years, encompassing World War II and the Korean conflict, the government expanded the aluminum industry on a massive scale through direct financing and incentives. This led to entry of new producers and government-owned inventories.

Much of the government's assistance was via the Defense Production Act which pushed U.S. production capacity high enough to meet domestic consumption and the Defense Department—projected mobilization needs. Other Federal civilian and military programs encouraged the aluminum industry to invest in mines and refining facilities in other Western countries.

By the mid-1960s, stockpiles had reached surplus levels and an aluminum disposal program was established to sell off government stocks of excess aluminum materials. But by 1976, the world again changed and new stockpile goals were established. These goals and actual inventories as of the end of last year are as follows (in metric tons):

National Defense Stockpile

Material	Stockpile goal	Total Inventory
Bauxite:		
Abrasive-grade,	1.016,000	—
Metal-grade;		
Jamaican-type,	21,337,000	10,626,000
Surinam-type,	6,198,000	5,385,000
Refractory-grade,	1,422,000	203,000
Aluminum oxide:		
Abrasive grain	—	46,072
Fused, crude	—	226,756
Primary metal	635,030	1,887

Source: U.S. Bureau of Mines

Aluminum is an "authorized controlled materials" (ACM) in the U.S. Defense Material System (DMS). Under DMS, ACM defense orders are given a priority. This means that in the event of a national emergency vendors and suppliers must meet ACM orders before other non-essential civilian orders are met.

Presently, only the U.S. government has a stockpile activity among the Western powers. Japan established a nominal stockpile goal in 1982, and their government purchased about 53,000 metric tons in the last quarter of 1982, and another 57,000 metric tons in the first quarter of 1983. Small additional purchases were made so that the total stockpile is now a comparatively conservative 150,000 metric tons. France began a stockpile program in the mid-70s, but its goal and inventories are a state secret. In trade circles it is thought to be non-existent. West Germany gave up stockpile plans because of severe recession and Great Britain does not include aluminum on its list of strategic materials.

Spreading and Other Strategies

There is an expression in commercial metal circles: "It's tradeable." This refers to the tradeability of metal futures contracts in combination with other months of the same futures, other metal futures contracts, or physical metal. Spreading, cash and carry, borrowing/lending, are the most widely used "tradeables."

The futures market is a price-in-time mechanism and spreading is one of its applications. But, unlike outright commodity trading where traders probe markets and make studies to detect potential moves, spreaders not only analyze intermediate and long term factors but also factors that could trigger changes in the price relationship of the various months.

Spreading creates large leverage because margin deposits are small. COMEX only requires a nominal margin deposit. On the LME, margins are as mutually agreed between broker and customer, but again it is nominal. Commissions are lower on spread than on outright trades. With lower margins and commissions, traders sometimes think they can obtain a better risk/reward ratio.

Spreading may appear less risky than taking outright positions, yet this is not always true. Spreads do not always behave in text-book fashion. Spot news, order imbalance, back-spreading can all affect spreads. Consequently, price differences may not perform within anticipated parameters and could create larger-than-expected profits or losses, especially since the transaction is so highly leveraged.

TIGHT SUPPLY SPREAD: This spread is used when a shortage of deliverable stocks is anticipated. If a trader expects that exchange-certified warehouse stocks will not be sufficient to meet delivery requirements of an up-coming month, he anticipates the difference between the nearby contract and a deferred contract to narrow and/or go to a premium. He can buy the nearby and short the deferred.

INDUSTRIAL DEMAND SPREAD: If futures are traded at full carrying charges and if a spreader thinks industrial activity is about to suddenly accelerate, he can buy the nearby contracts and short the distant contracts. If economic activity prompts a sudden increase in demand, nearbys may start trading at less than full carrying charges discount. This derives from the alternative savings factor (see section on carrying charges) caused by industrial companies maintaining larger physical inventories to meet stepped-up production schedules.

ALUMINUM/COPPER SPREAD: The price relationship between these two metals is important to industry since they can be used interchangeably in some applications. If the price of one metal gets out of line, the other can be substituted. As price data on the new COMEX aluminum contract is accumulated, and price relationships develop, many spread traders will look upon the "ali/copper" spread as they have the soybean crush spread.

In 1983, aluminum went to a premium over copper for the first time since World War II. Why? During the just-concluded recession (lower metal consumption), aluminum producers cut back production, while copper producers, mainly foreign government-owned production facilities, were forced to continuously produce material and were dependent on the foreign exchange generated from copper exports. They found it impossible to cut back.

With energy costs so dominant in aluminum pricing and political considerations outweighing economic situations in copper production, this spread will become more popular than the gold/silver spread which appears to be based more on sentiment and the dreams of hard currency advocates than on reality.

CASH AND CARRY: Metal futures spreads designed to take advantage of changes in interest rates, however, are not as popular as they used to be. With the introduction of financial futures, traders can participate directly in interest rate moves. There is, however, one strategy still being used—Cash and Carry—which refers to a plan whereby physical aluminum or aluminum warrants are purchased and held. Deferred contracts are sold against the purchase. The profit is generated by the investor's ability to borrow money to finance the purchase at *less* than the interest component inherent in carrying charges within the futures market. For metalmen this is an effective way to "make interest." And, there is always the possibility of the market inverting, creating a "grand slam" profit.

Traders, however, should be aware of one little-known risk—warrants are not for precise weights. When buying a spot contract and selling a distant contract, the purchase invoice is calculated on the exact weight. Exchange rules permit weight variances of plus or minus 2 percent on aluminum. When the warrant is redelivered, the invoice is calculated on the full size of the contract. Although it is rare for warrant weights to deviate the allowable maximum, the risk should not be ignored. A trader receiving a warrant for the less than full weight could realize a loss in a rising market.

BORROWING/LENDING: Borrowing is the purchase of a nearby metal and the sale of a forward metal. It is used when a merchant or consumer needs metal immediately and can replenish it at a later time, hence the word borrowing. It works this way: The merchant buys a nearby contract and simultaneously sells a forward contract. He accepts delivery on the nearby. Then, when his traditional source of material becomes available he delivers it against his short sale. By buying and selling at the same time his borrowing costs are predetermined. If he is unable to make delivery he can re-borrow. In other words, cover his original short and sell short a more forward contract. Lending is simply the opposite procedure. Borrowing and/or lending usually do not affect ones' bank credit lines.

Hedging

Hedging can be broken down into three categories. They were described more than 20 years ago by the noted commodity commentator and theoretician Holbrook Working as arbitrage hedging, operational hedging and selective hedging. In all three types, the commodity markets serve as a substitute for price and/or time.

Arbitrage hedging is the hedging most frequently described in college texts and brokerage literature. It is the equal and opposite theory. It is a method of protection against adverse price movement and is accomplished by shifting unwanted price risk onto the futures market. Companies with physical inventories, including alloys and scrap, can offset their position with a counter-balancing short sale in the futures market.

Should aluminum prices climb, the hedged company sustains a loss on the futures transaction, but that loss is offset by a corresponding rise in the inventory's value. If prices decline, the futures contract would show a profit but the inventory value would have dropped, again by approximately the same amount. In essence, arbitrage hedging protects the value of an inventory by locking in a price.

In an operational hedge, the futures market serves as a substitute for physical metal. Companies agreeing to sell aluminum or aluminum products without physical inventory on hand or material purchase agreements are actually taking a speculative short position. The financial exposure can be reduced by taking a counter-balancing long position in the futures market. This hedge allows manufacturers, for example, to maintain optimal production schedules without having to make immediate material commitments. Materials may be purchased at a later date and the long futures position sold or, in a few rare cases, actual delivery of the futures contract can be taken.

The third type of hedging is selective. Selective hedgers use the futures market when they feel price levels are advantageous. A secondary smelter, for example, could sell futures contracts before he has processed and smelted the material if he felt prices were high enough and he could lock in his profit. Or a foundry, thinking prices will be higher six months down the road, could buy futures. This is a valid commercial use of the price-in-time mechanism of the futures market.

The volatility we've seen in metal prices in recent years has caused more and more corporate treasurers to use hedging as a financial planning tool. But the key to successful hedging is knowing your "basis."

The difference between the price of a cash commodity and futures is referred to as the "basis." The term not only applies to the difference between spot aluminum and aluminum futures, but to the difference between cash aluminum alloys, cash aluminum scrap and futures. When hedging, the basis is, in fact, unhedged. That is to say, spot aluminum and futures should move in parallel fashion, however, economic forces sometimes cause the two prices to respond to a differing degree.

Practical experience tells this writer that hedges are rarely perfect. Basis changes work favorably in some instances and unfavorably in others. Over longer periods of time the law of averages tends to even out the results. However, there is always the possibility of an extreme basis change.

Basis analysis is more important in the aluminum market than other metal markets. Most metalmen possess aluminum in a form other than pure alloy, semi-fabricates, scrap, etc. For them the problem of studying the basis is essential. Not only do they have a non-pure item but in most cases they sell their material in particular geographical markets, each of which has its own peculiarities. For best results metalmen should take historic futures prices and the daily sales prices they have logged in their records of previous transactions and make a regression analysis study. Present COMEX data only goes back to December 1983 when futures started trading, but as time progresses a data bank can be developed.

My golden rule of hedging could be stated as follows: *Prior to initiating any hedge transaction it should be determined if the price level risk (change in price) is greater than basis risk (change in differences between cash and futures). If the price level risk appears greater, one should hedge. If the basis risk is greater, a non-hedge position is advisable.*

The price-in-time benefits of the futures market are not free. The total cost is made up of brokerage, transaction costs (buying at the offering, selling at the bid) and possible changes in the basis. Metalmen must maintain hedge ledgers to evaluate the effectiveness of their hedge program.

Rapid growth has been the history of the aluminum industry since World War II. It made small companies large and it made heroes out of anyone who happened into aluminum at the right time. It created many opportunities and buried many mistakes. This isn't the case in today's roller-coaster metal market. Effective risk management and material purchasing is essential for business survival. The futures market can be a useful tool. However, a comprehensive hedge program must first be developed. Such a program should encompass the following:

—A well defined corporate policy and strategy.
—A policy/strategy for each alloy or product area.
—A policy explicit enough to provide the individual responsible direction and guidance for quick decision.
—A strategy that continually evaluates price risk in relationship to basis risk.
—A knowledge of the total financial exposure from raw material and/or product inventories.

The critical section of this check list revolves around basis policy and strategy. These must be confirmed by as much historical data and actual experience as possible.

Trading Hints

THE UNHEDGEABLES: Two types of commercial transactions are unhedgeable. First, when specified prices in a contract are not based on exchange prices and when one party to the contract can fix the price at a time of his choice, e.g. back-pricing. For example, if COMEX aluminum has been trading at a constant discount to the producer price, a manufacturer might be tempted to forward hedge (buy futures) at the discount to the prevailing producer price, thinking that at a later date he could buy from the producer and lift his hedge. However, the futures price may drop while the producer price remains constant, resulting in a loss.

The second situation applies to producers themselves. When a producer sells aluminum to a consumer he sometimes gives the buyer 24 hours to decide if he wants to be billed at the producer price or at that day's futures settlement price. During this 24-hour period, the producer is unhedged and has, in effect, granted an option to the buyer. The only method of hedging under this circumstance is to buy an option from another producer or trader. If the producer were to hedge, he would expose himself to a loss equal to an amount by which the aluminum price moved during the 24-hour period.

TAX CONSIDERATIONS: *Without attempting to give tax advice, the following should be noted.* U.S. tax laws established the method by which commodity transactions on U.S. exchanges are taxed. LME trades may not fall into this category. Also, since LME profits are not available until prompt date, not liquidation date, the date a profit becomes taxable may differ from that of COMEX transactions. *Traders should consult their tax counsel.*

USING SCRAP AS A FORECASTING TOOL. At times the price of aluminum scrap can be used as a forecasting tool. Some movement in scrap prices tend to precede futures. This is especially true at the start of an upward move and occurs for two reasons.

First, under Japanese law there is a 9 percent import tariff on imported primary aluminum, but no tariff on imported scrap. When industrial demand picks up in Japan, consumers naturally buy scrap first, usually on the West Coast. This blip in scrap prices can be an early alert. Secondly, most secondary smelters are independently owned and operated. Their owner/operators, do not have to ask the "Board's" permission first, they can make split-second decisions. When they sense an upturn in demand, they, naturally, start to raise their price and hold back some material, again causing an uptick in scrap prices.

Scrap prices can be monitored daily in the *American Metal Market*, or secured from any commodity broker.

CURRENCY CONSIDERATIONS: Americans trading on the LME must consider currency fluctuation. Currency exchange rates do not affect aluminum values directly but if the dollar were devalued, naturally more dollars would be needed to purchase a quantity of aluminum than before the devaluation. Thus, while LME prices would tend to remain unchanged, COMEX prices would rise to maintain a parity with prevailing world value. But there are built-in limits. If the dollar were to sink 5 percent it would not automatically mean a full 5 percent rise in domestic aluminum prices, because a large portion of any devaluation is usually discounted in the price of any fungible commodity such as aluminum. The following should be kept in mind:

Rule of Thumb:

1. Dollar expected to weaken relative to sterling:
   Bullish for COMEX
   Bearish for LME
2. Dollar expected to strengthen relative to sterling:
   Bullish for LME
   Bearish for COMEX

When putting on an LME position, a trader should either trade in dollars, which is easily done, or place a counter-balancing sterling hedge for the same prompt date in the British foreign exchange market (FOREX) or in the U.S. foreign currency market (INTER-BANK). Commodity brokers can easily arrange sterling hedges. There is nothing more frustrating than being "right" in the market only to wind up losing money because of adverse currency fluctuations.

The Outlook

The outlook for aluminum in 1984 seems to be paralleling the robust economic recovery in the United States. If the latter is sustained by political and monetary influences—only good news in an election year coupled with decreased long and short term interest rates—the bull market on the demand side will continue.

The price chart already resembles a roller-coaster and a backward glance might be helpful in sizing up the future. Aluminum inventories doubled to historical levels in the U.S. and in most producing countries owing chiefly to the recessionary cutbacks in 1980 and 1981. Then, facing towering interest rates, aluminum mills, extruders and consumers stopped ordering and worked off their inventories.

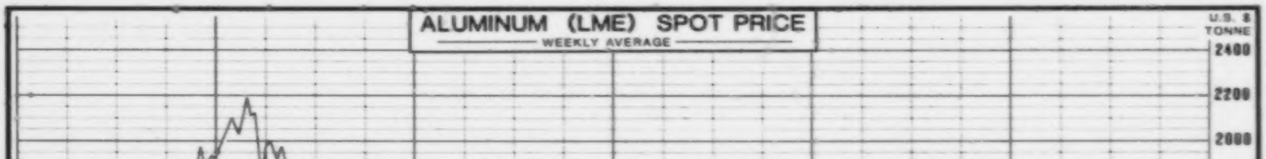
The aluminum industry is always very quick to sense economic change and, as expected, cut back production. Then, at the start of 1983, world demand for aluminum started rising again as output started recovering to a pre-recessionary pace. As this demand outstripped the re-ignited production, prices of the white metal started to climb, creating the current (early 1984) bull market. In fact, aluminum prices exceeded copper prices in 1983, an unusual phenomenon, indeed.

Looking ahead, if the recovery continues and if consumption in 1984–85 reaches pre-recession levels (10.9 million metric tons per year), the total available stocks would be decreased to an uncomfortably low level—about a 10-week supply. To meet this demand, a virtually impossible capacity utilization rate topping 100 percent would be required. New production facilities would have to be built.

As I see it, it is doubtful new or de-mothballed production capacity would be brought on line unless aluminum prices exceed $1.00 per pound. The key to predicting aluminum prices for the next few years will be the price levels maintained in the fourth quarter of 1984. If prices in the current quarter (Jan.–Mar. 1984) and the fourth quarter are not sufficient to spur capacity, and if demand rises to previous consumption levels, there is a real probability fresh shortages would crop up. This, in turn, would trigger extreme price volatility.

There may be a Catch-22, though. If the cost of energy is high at a time of peak demand, aluminum production expenses may make the metal too costly. Consumers could easily turn away from aluminum to such alternatives as copper, paper, tinplate.

Meantime, with aluminum gaining greater acceptance and momentum with traders through futures markets on the London Metal Exchange and COMEX, and with the turn-on-a-dime reaction time of a highly sensitive industry, aluminum is clearly the metal of the future.



SPREADING IN THE SOYBEAN COMPLEX

BY PHILLIP E. TIGER

The soybean complex has long been one of the favorite commodity groups for all traders. It is a market which is liquid in both nearby and distant deliveries and consistently volatile—thereby generating both long and short term trading opportunities at all times of the year. It is subject to strong seasonal and longer term cyclic patterns, and is technically orderly—tending to respect previous support and resistance levels and trends. The soybean complex is also one of the best—if not *the* best—market for spreaders, providing both trading and position spread relationships for both commercial, professional and speculative interests.

The soybean complex must be approached with an orderly perspective. A disciplined analytical approach combined with good money management will provide a trader with a market basket of trades throughout the year. One must have and maintain a concept of the fundamental (supply/demand) factors which affect the market, historical perspectives of prices in terms of what is relatively cheap or expensive, knowledge of the cyclic tendencies of the market with emphasis on seasonal cycles, and some sort of discipline based on price movement (i.e. charts) in order to limit losses and assess profit potential.

The trader will soon discover favorite spread relationships in soybeans, soybean oil, and soybean meal which suit his or her trading approach and which demonstrate a tendency for repetitive and potentially profitable behavior year-to-year.

Seasonal and Other Cycles

The most important analytical factor to the soybean trader is the seasonal cycle. The planting, growing and harvesting seasons all have certain price behavior patterns associated with them which can help both the net and the spread trader to anticipate trading opportunities.

One can generally expect to see seasonal weakness in September in anticipation of the U.S. harvest, followed by some moderate strengthening into year-end. Then comes the "February Break" which is usually the result of a combination of reduced export sales (the Great Lakes are closed to shipping from mid-December to mid-April), cash movement of soybeans in the new tax year, and some anticipation of the Southern Hemisphere crop. March, April and May are seasonally strong months for soybeans and soybean oil as the "tail" of the U.S. crop is being utilized and the Brazilian and Argentinian crops are not yet available to the market place.

There have been some significant changes in seasonal tendencies during the past decade as the Southern Hemisphere crop has grown and become a greater factor in world supply and demand. The Brazilian and Argentinian crops in 1972 were below four million metric tons while in 1984 they are expected to be more than 18 million tons—an increase of 450%. The United States, produced 34.6 million tons in 1972 (equal to 72½% of the total world crop) and would have produced more than 60 million tons in 1983 (were it not for the drought), an increase since 1972 of only 75% and equal to 64% of world production. (The author views the 1983 U.S. drought as an anomaly when analyzing comparative data over a 13-year period). The increasing importance of the Southern Hemisphere crop has shifted the seasonal emphasis from the July contracts—which were the last of the old crop in the past to the earlier May contracts. Note that Southern Hemisphere beans are planted in November and December and harvested mostly in March/ April, thereby being available to the world market by mid to late spring.

The seasonal cycle, therefore, is to look for lows in the futures markets (which usually precede cash market lows by four to six weeks) during the late August to mid-September period with secondary lows in early March; and to look for highs in the mid-April to mid-May period. Note that a drought, such as that experienced in the United States in 1983 will distort the regular cycle—(the high price for beans in 1983 occurred on September 9th). The soybean products have somewhat different cycles. Soybean oil will tend to parallel the bean cycle but soybean meal tends to be affected by seasonal demand at mid-summer and at year-end, thereby making the January and July contracts the strongest for soybean meal.

COMMODITY	PRINCIPAL *STRONG MONTHS*	PRINCIPAL *WEAK MONTHS*
Soybeans	May	Sept., Jan.
Soybean Oil	May	December
Soybean Meal	January, July	October

There are longer cycles to note as well. Soybeans feature both two-year and three-year cycles, which are important. The harmonics would therefore show the most pronounced behavior when both cycles are in phase with each other—approximately every six years (witness 1956, 1972, 1973, 1977, 1980 and 1983). Soybean meal has a slightly shorter cycle than soybeans, while soybean oil has a slightly longer cycle—just under seven years. Therefore, one can expect the most consistent cyclic activity from soybeans, with meal and oil tending to be slightly out of phase both with Beans and each other.

Historial Analysis

The next major analytical factor is that of historical analysis—Whether the market price is relatively cheap or expensive. This is not as simple as one might at first think because one must first establish a base year from which relative price levels are increased and then consider the concept of price, not only in American dollars but, because soybeans are an export commodity, in the currencies of the principal trading nations as well.

1971 is a good year to use as a base as this is the year when (a) currencies were allowed to float rather than be tied to previous agreements, (b) crop production was relatively high with significant carry-out stocks, and (c) the major inflationary push had not yet begun. Note the prices of soybeans, soybean oil, and soybean meal as of September 1, 1971—$3.14/bushel, 13 cents/lb., and $78.00/ton, respectively. Allow for inflation since 1971—whereby a 1984 dollar is equivalent to approximately 45 cents in terms of 1971 dollars. Then the 1971 base prices become: soybeans—$6.90/bushel, soybean oil—28½ cents/lb. and soybean meal—$172.00/ton. This would indicate that, when conditions are equivalent (i.e. good crop, adequate carryout) the inflation-adjusted levels should represent areas of support.

One cannot look at these numbers only in terms of dollars. The Dollar/Deutsche-Mark ratio in 1971 was near 3.7. That means that the $3.14/bushel beans cost the equivalent of 11.6 Deutsche-Marks to someone using the Deutsche-Mark as their hard currency. Now move to 1981. The Dollar/Deutsche-Mark ratio was near 1.8 to 1 while inflation adjusted soybeans would cost near $6.40/bushel—costing 11.6 Deutsche-Marks/bushel—the same as 10 years previous. This means that, to the world market, soybeans had not risen in price in nearly a decade given equivalent supply/demand statistics.

Now move to 1984. The Deutsche-Mark has declined in value against the dollar by nearly 50% in only three years. Though soybeans have declined in price from the 1980 highs near $11.00/bushel to near $7.25/bushel, the cost in Deutsche-Marks at $7.25 in early 1984 was near 20. D.M./bushel—an increase of more than 40% over 1981. One might expect export markets to decline somewhat when the dollar is strong and be firmer when the dollar is weak and this is indeed the case.

Now look at the other side of the coin. Soybeans are "cheap" when priced below $6.90/bushel combined with a relatively weak dollar. When are they expensive? When the dollar is strong, the soybean market might be expected to have difficulty staying above the "in balance" figure of $6.90/bushel. But one should also note that soybeans have reached above $10 three times in the past decade—1973, 1977, and 1980 and not been able to maintain those levels for more than a few months. However, $10./bushel in 1973, given equivalent circumstances, would mean approximately $20./bushel allowing for price inflation during the past decade. Therefore, though prices at or above $10./bushel have proven difficult to maintain (i.e. "expensive") such levels are likely to be surpassed and maintained at some point in the future when relative values warrant it.

Fundamental Analysis

Fundamental analysis must be an important component of one's thinking when considering any position—be it spread or net. The overall supply/demand balances in conjunction with shorter term factors will have a decided effect on price action. The trader must therefore have a grasp of fundamentals.

There are several fundamental factors which are of particular importance to the soybean market and the structure and behavior of soybean spreads. These include U.S. crop size, U.S. carry-out stocks (carryover), world demand, Soviet and Brazilian/Argentinian crop production, world supply/demand balances of other fats and oils and protein meals and, of shorter term importance, the location and availability of U.S. supplies.

The United States Department of Agriculture is the principal source of U.S. and world supply/demand data. There are also several private reporting and statistical services such as the Commodity Research Bureau and, of course, a plethora of ongoing updates (and opinions) from brokerage firms. USDA reports are the ones most relied upon by the market place though some private forecasters such as Conrad Leslie are given significant credence as well. This is not to say that USDA reports are infallible. The January, 1984 "Crop Production" and "Stocks in all Positions" reports, for example, had significant disparities between each other though they were issued only a week apart. Nevertheless, it is the ongoing tally of such reports with their accompanying revisions that gives fundamental analysts their data base.

The fundamental factors of greatest importance to the spreader are two—available supply and projected carry-out stocks. Available supply is reported weekly and monthly and would indicate particularly the stocks of soybeans (Chicago/Toledo) and soybean oil that could be in deliverable position. Soybean meal stocks are of somewhat less importance. Another indicator of available supply is the quantity of beans, meal and/or oil delivered against spot contracts. Basis levels are also important as they will give an indication of demand and particularly an indication as to whether or not demand is sufficient to move supplies into deliverable position and/or deplete existing supplies.

The carry-out stocks figure is a more nebulous statistic but of greater importance to the spread relationships. This is because it is an indication of potentially scarce or abundant supplies between crop years. The problem here is that end-of-crop stocks are dependent on a multitude of factors, many of which are estimated rather than actual, and the greater the time before ending stocks become a reality, the more volatile the spreads will be—particularly old crop/new crop relationships. One might expect that as the crop year begins (soybeans—September; oil & meal—October), ideas of exports and domestic consumption for the coming year are at best relatively poorly structured estimates. These estimates become more and more concrete as the year progresses and as actual consumption and exports are measured and subtracted from increasingly accurate estimates of supplies.

The Southern Hemisphere crops which are harvested for the most part in March/April further compound the forecaster's difficulty. A poor Southern Hemisphere crop will tend to enhance the value of U.S. soybeans and potentially increase export demand at the end of the U.S. crop. An abundant Southern Hemisphere crop will have the opposite effect.

The soybean spreader should have an idea of Chicago/Toledo stocks when trading the nearby deliveries. Back-spreads (selling the near month versus buying the deferred delivery) will be somewhat favored when stocks are abundant—above 25 million bushels. Forward spreads will tend to be favored when Chicago/Toledo stocks are relatively scarce—below 10 million bushels.

Carryout stocks are significant in terms of supplies needed between the end of the old crop and new crop harvest. This is the period between mid-August and approximately November 1st. One can consider average weekly crush near 20 million bushels and weekly exports between 15 and 20 million bushels. Therefore, carryout stocks should represent 4 to 6 weeks supply. This would calculate to between 130 and 200 million bushels. When carryout stocks are at or below this level one can expect prices to rise and forward spreads to be favored until demand has been sufficiently rationed to allow the supplies to last until the new crop harvest. Spreads will conversely tend to favor new crop deliveries when carryout stocks are above 200 million bushels as prices will tend to be weak and the market will reflect some aspect of carrying charges.

Carrying Charges

Carrying charges are an important component of all spreads in the soybean complex. The definition of carrying charges per the Chicago Board of Trade Manual is: (1) Those costs incurred in warehousing the physical commodity generally including interest, insurance and storage; (2) "full carrying charge"—a situation in the futures market when the price differentials between delivery months reflect the full cost of interest, insurance, and storage."

One can assume the following storage and insurance costs for the soybean complex in early 1984: Soybeans 4 cents/bushel/month, soybean oil .20 cents/lb./month, and soybean meal $70/ton/month. This leaves the primary component of carrying charges—interest—to be calculated. Each contract of a commodity represents money and that commodity, when in storage, represents money value in storage and therefore incurs appropriate interest charges. One can calculate the value of the contract, then, by applying a current interest rate (the prime rate is often used as a rate approximation), to determine the interest component of carrying charges. Examine soybeans at $8.00/bushel and an interest rate of 11%.

Contract Value: $40,000. (5000 bushels @ $8.00/bushel),

$$\text{Interest cost/month} = \frac{\$40{,}000. \times .11}{12 \text{ months}}$$

$$= \$367./\text{month } (7\tfrac{1}{4} \text{ cents/bushel/month})$$

Add the interest component (7¼ cents/bushel/month) to the storage and insurance component (4 cents/bushel/month) to arrive at the calculated full carrying charge of 11¼ cents/month when soybeans are at $8.00/bushel and interest rates are at 11%. Note that significant changes in interest rates and/or price will have a noticeable effect on carrying charges. Note that in the above calculations, soybeans at $10.00 bushel and interest rates at 15% would yield an interest component of carrying charges of $625.00/month or 12½ cents/bushel/month. This would make full carry 16½ cents/month when beans are at $10.00 and interest rates are at 15%. If one were spreading January versus July soybeans, the differential of 6 months would indicate a full carry of 67½ cents at the lower rate noted above versus 99 cents at the higher rate.

A market will rarely exhibit "full carry." Even the most bearish situations will rarely result in greater than 85% of full carry being reflected by the differentials between futures months. However, when a severe discount exists—and particularly if the outlook for interest rates is for them to be stable or declining, the limited risk spread becomes a possibility.

A forward interdelivery spread (i.e. buy the nearby/sell the deferred delivery), initiated when the market structure reflects a large percentage of the carrying charge, involves risk only to the degree of full carrying charges. When and if a market reflects "full carry," the spreader can hypothetically take delivery of the long in the nearby futures contract and hold it and deliver it against the short position in the deferred contract at no cost. This defines the risk in such a spread. For example: a long May/short August soybean position established at 3 cents premium August, when full carry is 13 cents/bushel, would have a maximum risk, defined by carrying charges, of 10¢ while profit potential would have no such limitation. One must remain aware, however, of the potential expansion of carrying charges if prices rise and/or interest rates increase. Note that rising prices, if they result from a bullish supply/demand situation, will usually favor the front month because demand for immediate supply will cause buying to be concentrated in the near term.

Technical Analysis

Once a spread relationship has been examined for cyclic, historical and fundamental factors, the problems of defining entry levels, assessing risk and setting profit objectives becomes of prime importance. These problems can be solved with an appropriate form of technical analysis. There are many ways to depict price movement graphically. The most appropriate for the spread trader is the "close-only" chart.

The close-only spread chart is a line chart which connects the differentials between settlement prices on a daily basis. The closing settlement prices are used for two reasons. First is the fact that, since the two delivery months in question rarely trade simultaneously, measurement of differences during the trading day will often give a false reading. This is not to say that all closing differentials are accurate—for they are not—but they do reflect a reasonably close approximation as both contracts will be likely to trade within the closing range. Beware of distortions caused by a large amount of "stops" or MOC (market-on-close) orders in one contract, or when one contract is relatively illiquid. Secondly, one can consider the closing prices as potentially the most important price of the day. These are the values that traders are willing to "take home" and that represent the values which (after day trades, bona fide hedges, etc., have been input to the market place) will be the basis for the following trading session's advance or decline.

The "close-only" spread chart will depict areas of support and resistance and help define the trend. More sophisticated technical tools, such as moving averages and oscillators, are of limited utility for spread trading because most spreads move relatively slowly and a moving average signal will, therefore, usually occur too late to get a trader in or out of a position in a timely and profit-conserving manner.

The Seasonal Spread Index

Another technical tool which combines both graphic and cyclic analysis is the Seasonal Spread Index. Seasonal studies will indicate the most propitious average timing for reliable spreads—early October for the January/May soybean meal or mid-May for the September/November bean spread, for example. Shorter term cycles will also be evident and helpful in pinpointing the most favorable timing for actual entry and exit of a position. Spreads tend to be less volatile than equivalent net positions, though, and the shorter cycles have proven to be of somewhat limited utility.

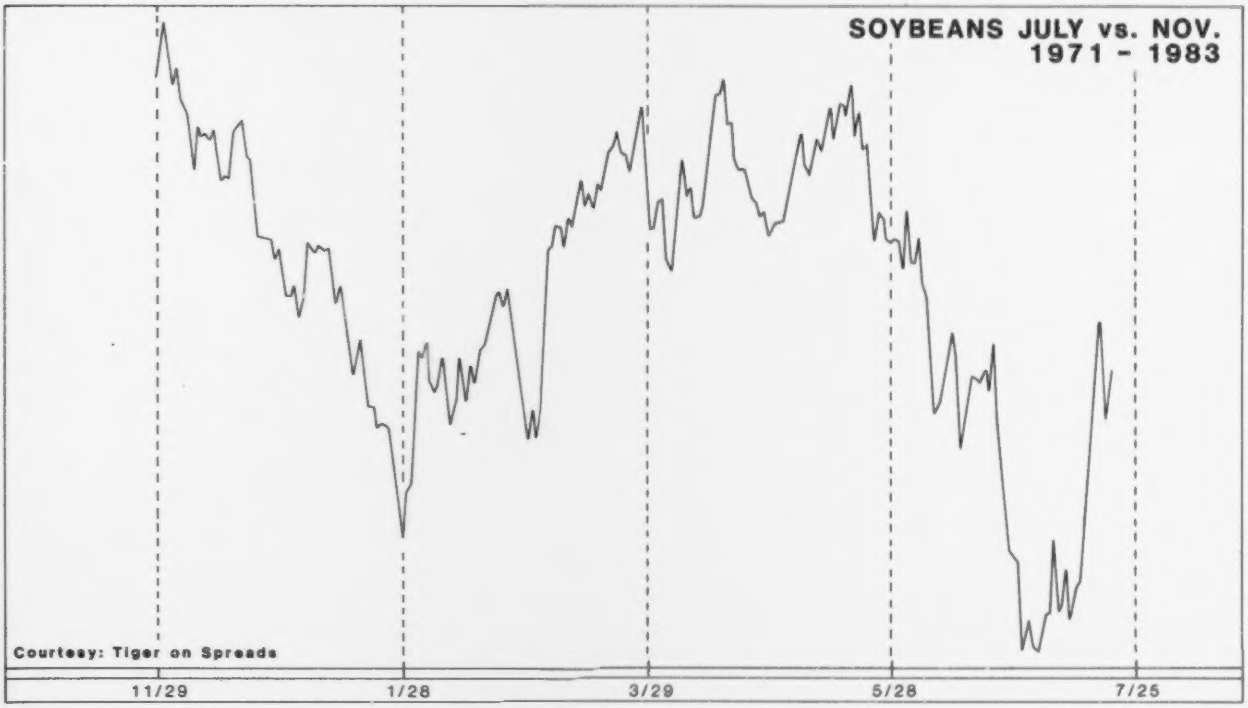
The Seasonal Spread Index is designed to illustrate the ability of a spread (or given net commodity) to perform within a given behavior pattern based on analysis of previous behavior patterns. It differs from historical analysis in that it is not concerned with price levels, but rather with the tendency for prices or differentials to rise and fall at specific times of the year and, perhaps more importantly, for lows and highs to occur at specific times of the year.

The year 1971 is considered by many to be a benchmark year, as it followed the August 1971 release of currencies and gold prices from prior agreements and preceded the agricultural price explosion generated by short crops of 1972, and the subsequent run-up in oil prices (and resultant inflationary pressures) a few years later. Therefore, most seasonal indices presented here are 13-year indices—giving a representation of spread behavior for the period beginning 1971–1972. An index of longer or shorter duration will occasionally be used, based on a judgment of its validity or due to a shorter data base (many futures contracts now traded did not exist or were not viable as far back as 1971) or on longer term reliability beyond the influence of the 1971–1973 economic factors.

Seasonal Spread Index Scales

The seasonal index horizontal scale is simply the life of the spread beginning when the later option begins to trade and ending at the expiration of the earlier delivery. The greatest confusion regarding seasonal indices concerns the meaning of the vertical scale. *The vertical scale represents contract values as a percentage of highs and lows, and is not numbered.* Each year involves different values, so low price years must be prevented from being eclipsed by high price years. The 1973 July/November soybean spread, for example, went to a five dollar July premium. The behavior patterns of years with smaller values would be lost and the index would fail to give a true representation if some compensatory adjustment were not made. Each year's price activity is reduced to a range of 0–100, where 0 equals the contract low and 100 equals the contract high. This puts all years on an equal footing as each year now shows the spread progressing between a range of 0 to 100 and, by weighting these numbers for intervening weekends and holidays and averaging, a representation of true behavioral tendencies is achieved. Thus, using the July/November soybean example, one can see that most activity takes place from 37 percent to 50 percent of contract value until the July delivery period. This number is of relatively minor importance, though. What is important is that the index shows a distinct pattern, indicating a tendency for July to gain on November from a low made at the end of January with secondary and tertiary lows being made at the end of February and the beginning of April, respectively. The spread tends to peak by mid-May, at which time back-spreading might be appropriate.

The Seasonal Spread Index is therefore a method whereby spread or net behavior (the same technique can be used to generate indices for individual delivery months) can be graphically represented independent of distorting price anomalies. The horizontal scale is merely a time plot of the life of the spread or net position under scrutiny. The index is best used in determining the most likely time frame for highs and lows and the probability for a seasonal trend. But, it is not



the sole consideration in timing of trades as one must consider the historical, technical, and fundamental factors as well.

Principal Soybean Spreads

There are two categories of soybean spreads—those within the crop year (September through August) and the old crop/new crop spreads. The most reliable soybean spread is the *intra-crop September/November spread*.

There is a tendency for September to strengthen against November soybeans during spring and into early summer, particularly when carryover stocks are in potentially tight balance and/or problems develop with the planting, growing, or potential harvesting of the current crop. Nevertheless, the September contract has always gone to at most a 5 cent premium and more often to a discount to November futures by the end of the first week of September, if not sooner. The following data table shows the behavior of this spread since 1969 with the gain of November over September shown.

One will note the inconsistency of the time-frame

September versus November Soybeans

Contract Year	Approx. Date High	Spread High (¢)	Approx. Date Low	Spread Low (¢)	Gain or (Loss) ¢ per bushel & $ per contract	General Market Trend
1969	6/1/69	11½ Sept.	9/15/69	5 Sept.	6½/$325	
1970	6/1/70	3½ Sept.	9/15/70	4 Nov.	7½/$375	
1971	3/1/71	10 Sept.	9/15/71	4 Nov.	14/$700	
1972	4/15/72	19 Sept.	9/5/72	4½ Sept.	14½/$725	Beg. Bull Market
1973	6/1/73	297½ Sept.	9/19/73	22½ Nov.	3200/$16,000	Bull Market
1974	9/1/73	32 Sept.	9/19/74	16 Nov.	48/$2400	
1975	10/15/74	70 Sept.	9/1/75	12½ Nov.	82½/$4125	
1976	10/1/75	7 Sept.	9/1/76	16 Nov.	23/$1150	
1977	5/1/77	97½ Sept.	9/19/77	5½ Nov.	103/$5150	Bull Market
1978	3/15/78	44 Sept.	9/15/78	1¼ Nov.	45¼/$2262	
1979	3/1/79	29 Sept.	9/15/79	6 Nov.	34/$1700	
1980	9/1/79	6½ Sept.	9/1/80	22½ Nov.	29/$1450	Bull Market
1981	10/15/80	47½ Sept.	6/15/81	22½ Nov.	70/$3500	Bear Market
1982	12/15/81	1 Sept.	3/1/82	11 Nov.	12/$600	Exp'd @ 6 Nov Bear Market
1983	12/1/82	5 Sept.	7/1/83	19 Nov.	24/$1200	Exp'd @ 5 Nov Weather Bull Mkt.

Type: Seasonal Back-Spread

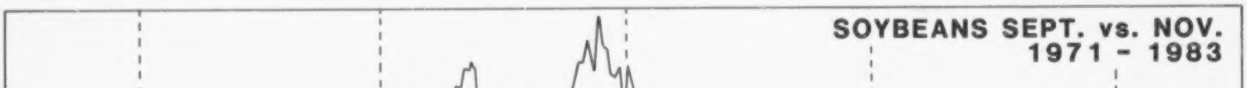
Initiation Period: Year-End +/−2 Months

Average Initiation Diff.: 45½ September Premium

Success Ratio: 15 Years Profitable/−0 Years Unprofitable

Termination Period: September 15th

Average Termination Diff.: 11¾ November premium



SOYBEANS SEPT. vs. NOV. 1971 - 1983

Courtesy: Tiger on Spreads

for the highs in this spread. An examination of the Seasonal Spread Index will indicate an average initiation period of from mid-April to late May. What is more important though, is the consistency of lows averaging 10¼ premium November and occurring in all but the past three years on or about September 1st. Note that even in the past three years, the September 1st price, though not *the* low, averaged in excess of 10 premium November.

The next soybean spread of note is the *November/January Spread.* When the spreads establish lows in September, the November/January spread will often reflect 60 to 80% of full carrying charges. If carryover stocks from the previous crop year are relatively small and any weather-related harvesting problems develop, a squeeze can develop relative to the November contract. This is abetted by the fact that many farmers will hold off "selling their crop" until the next tax year and use the January or March delivery to sell their soybeans. Therefore, if Chicago/Toledo stocks are low (under 15 million) and a weather problem develops, the November contract can go to a premium over January in the short period of time from September 1st until mid-November. Note, however, the potential liabilities of (a) holding a long November contract into the delivery period and risking delivery against the long November contract, and (b) the possibility that basis levels may shift thereby encouraging the shifting of soybean stocks to Chicago/Toledo elevators, thus negating the spread potential and increasing the risk of delivery.

The next in the sequence of soybean spreads is the *January versus March, May or July back-spreads.* January is a seasonally bearish month for three reasons. First, it is only the second delivery month of the crop year and therefore is usually accompanied by heavy supply from the recent harvest. Secondly, it is the first delivery month of the calendar year and will often face deliveries which have been kept off the market awaiting the new tax year. Thirdly, the Great Lakes are closed to shipping from mid-December until mid-April, thereby giving January Chicago/Toledo stocks a logistic disadvantage. This will be an even greater negative if the upper Mississippi River is suffering from ice congestion, thereby limiting barge traffic. Therefore, as long as January forward spreads are reflecting less than 40% of full carry in the October/November period, short January/long May or July spreads are warranted for a move to 60 to 80% of full carry by the first week of the year. Whether the long month is May or July is a function of the market structure. The risk and potential gain will both be greater, the wider the time differential of the spread.

Once the negative delivery month of January has expired, the spread trader should concentrate on the May forward spreads. May soybeans have demonstrated a tendency to gain on all distant deliveries beginning from a seasonal low which occurs between the end of January and the end of February. The increased soybean production of Brazil and Argentina has served to favor the May contract over the July as the primary and strongest U.S. old crop delivery. This is enhanced by the opening of the Great Lakes to shipping during early April, which encourages demand for Chicago/Toledo soybeans. The spread will usually favor May from late February into April and then accelerate during the delivery period—particularly if stocks are relatively tight and carryout stocks are forecast to be under 150 to 200 million bushels. Note once again the potential liability of being long May into the delivery period. However, one should also recognize that the costs of taking delivery and re-delivery in soybeans are relatively modest (usually a modest delivery fee plus an extra commission plus the daily carrying charges). As long as you remain short the distant delivery, you are hedged and should not suffer from price adversity or advantage except as reflected in changing spread differentials.

The *May/August spread* has been best when established near 55% to 60% of carrying charges and has tended to move to a May premium of 14 cents or more in most years with premiums sometimes exceeding 20 cents in 1973; and over $1.00, in 1975, 1977, and 1981. One should note also the poor performance of the spread when carryout stocks were ample and particularly when interest rates (and therefore carrying charges) were high. This spread is not a consistent performer such as the September/November but it is an excellent trading vehicle when fundamental and historical conditions are supportive.

Magnify volatility of the May/August spread ten-

May versus August Soybeans

Contract Year	Approx. Date Low	Spread Low (¢)	Approx. Date High	Spread High (¢)	Gain or (Loss) ¢ per bushel & $ per contract
1973	10/17/72	¾ May	5/8/73	154 May	153¼/$7662
1974	1/23/74	9 August	4/2/74	14 May	23/$1150
1975	1/23/75	15 August	5/8/75	21 May	36/$1800
1976	2/27/76	14 August	10/8/75	2 August	−12/($600)
1977	1/28/77	2 August	5/14/77	51 May	53/$2650
1978	10/18/77	11¼ August	4/30/78	52 May	63¼/$3162
1979	4/29/79	22 August	2/9/78	5 May	−27/($1350)
1980	4/5/80	37 August	5/12/80	23 August	14/$700
1981	2/27/81	37 August	5/9/81	27 August	10/$500
1982	2/10/82	22½ August	3/24/82	7 August	15½/$775
1983	4/28/83	23 August	1/10/83	7 August	−16/($800)

Type: Seasonal Forward-Spread

Success Ratio: 8 Years Profitable/3 Years Unprofitable

(1) Timing more important than initiation level because of interest rate changes.

Initiation Period: Late January–end of February

Termination Period: mid-April (nominal)

Average Initiation Level: approx. 10¢ premium August(1)

Average Termination Level: 12 to 20¢ premium May fold and one has the *old crop/new crop spreads of May or July versus November.* These spreads traverse vast ranges each year and are the most susceptible to crop scares (both Southern and Northern Hemisphere crops), carryout stocks, and government intervention (i.e., support programs, embargoes; et al.). The high volatility of these spreads is of course what makes them so attractive—and dangerous.

The old crop/new crop spreads tend to follow the same pattern as the May/August but with considerably greater swings. The most significant factor to these spreads is the anticipation of carryover stocks. Any carryout number of 200 million bushels or less is potentially tight and will result in an old crop premium. The magnitude of that premium will oscillate based on the changing anticipation throughout the crop year. The 1984 May/November spread is a good example of what can occur. The spread came on the board on July 29th, 1983 at 75¼ cents premium to the May contract. The timing was at the beginning of the 1983 drought but before the critical first half of August when the drought took its severest toll on the crop. The spread closed on September 12th, 1983 at its high of $2.14 premium May and at the top of the soybean market. Then came an extended decline to February 14th, 1984, and a low of 8 cents premium May—a decline of more than $2.00/bushel in five months. This was promptly followed by a 55 cent rally into the end of February. The outcome of the spread was not known as this article was written. But, with 1984 carryout projections at 150 million bushels, the outlook would be for some further strength to the old crop over the new. These spreads are obviously extremely volatile and not for the modestly financed trader or hedger. Nevertheless, they follow the fundamental situations and seasonal patterns very well. Note that historical analysis is of little utility with old crop/new crop relationships as the past decade has seen ranges for the July/November spread from a $5.00 premium for the old crop in 1973 (this was terminated by an embargo on soybean exports in June of 1973 which resulted in a collapse of the spread relationships) to a 45 cent discount for the old crop in June of 1981. (Note the record high interest rates and carryout in excess of 300 million bushels in effect at that time.)

Soybean Product Spreads

One could discuss the various aspects surrounding soybean oil and soybean meal spreads in great detail but one can summarize by noting the spread differences between the products and the soybeans themselves and noting the principal spreads in each product.

Soybean meal is in greatest demand as a protein feed during the cold weather months of January and February. This leads to the favorite seasonal *soybean meal spread of long January/short March or May.*

January versus May Soybean Meal

Contract Year	Approx. Date Low	Spread Low ($)	Approx. Date High	Spread High ($)	Gain or (Loss) $ per ton & $ per contract
1968	12/28/67	2.40 May	9/15/67	0.60 May	−$1.80/($180)
1969	12/28/68	3.00 May	8/20/68	0.80 May	− 2.20 ($220)
1970	9/1/69	2.40 May	1/7/70	10.75 Jan.	13.15/$1315
1971	10/15/70	1.40 May	12/15/70	1.80 Jan.	3.20/$320
1972	12/28/71	2.80 May	11/1/71	1.00 May	− 1.80/($180)
1973	8/4/72	2.20 May	12/30/72	35.20 Jan.	37.40/$3740
1974	10/24/73	4.00 May	12/10/73	14.00 Jan.	−18.00/$1800
1975	12/28/74	17.40 May	10/20/74	6.00 May	−11.40/($1140)
1976	10/10/75	8.00 May	12/20/75	1.00 Jan.	9.00/$900
1977	8/1/76	5.00 May	11/19/76	3.30 Jan.	8.30/$830
1978	9/2/77	7.80 May	1/3/78	2.20 May	5.60/$560
1979	8/6/78	5.00 May	12/18/78	4.80 Jan.	9.80/$980
1980	10/24/79	9.00 May	12/5/79	2.00 May	7.00/$700
1981	12/16/80	20.00 May	8/6/80	2.00 May	−18.00/($1800)
1982	9/16/81	13.80 May	12/11/81	1.50 May	12.30/$1230
1983	6/25/82	11.00 May	12/17/82	0.50 May	10.50/$1050
1984	7/15/83	9.00 May	10/28/83	2.00 Jan.	11.00/$1100

Type: Seasonal Forward-Spread

Success Ratio: 12 Years Profitable/−5 Years Unprofitable

Initiation Period: September–October

Termination Period: December

Average Initiation Level: $7.00 per ton May Premium

Average Termination level: $3.00 per ton January Premium

The time for initiation here is late summer—often during September or early October and particularly when the soybean meal spreads are reflecting a significant (60% or more) measure of full carrying charges. January will begin to gain on the spring months as cold weather begins to make the news. When a particularly cold winter or heavy snow situation occurs, the spread will often go to a January premium. One must be careful of the liabilities of holding the spread into the delivery period and therefore, look to take profits before the last week of December (there is often some softening of the nearby month just before delivery, as weak longs liquidate).

The next soybean meal spread of note is *short March/long May or July* which will tend to ease from the tightness generated by the January forward spreads as spring approaches. These spreads are best initiated near the end of January and usually mature by March 1st. Warm weather brings liquidation of livestock in front of the planting season and the prospects of Cattle being fed more on pasture than on feed grains and meal. There is also a tendency to crush for oil into spring, increasing the supply of soybean meal regardless of demand. These are the fundamental reasons behind the weakening of the meal spreads into spring. Although the summer meal spreads are a more erratic affair, the July forward spreads can sometimes be traded as a mirror of the old crop/new crop bean spreads and will reflect somewhat similar behavior during spring and early summer.

Soybean oil spreads are influenced by the other edible oil crops particularly palm and coconut oil though rapeseed is gaining in popularity and stature as a competitor. Palm oil becomes available to the world market along with Southern Hemisphere soybean oil in late spring. Therefore, the oil spreads tend to favor the nearby months during late winter and into early spring and to favor the back months from summer and into autumn. A serious weather problem can distort this of course, and as with meal, July forward spreads in oil will be responsive to the same stimuli as the old crop/new crop relationships. *Two spreads to watch in soybean oil are the long May/short December*—roughly paralleling the behavior of the May/November soybean spread, *and the short December/long* the following *May spread* which will tend to follow the behavior patterns of the January/July soybean spreads noted earlier.

A few words concerning meal versus oil spreads are in order here. There is a tendency for one product to dominate. The 1972–1973 Bull Market was led by soybean meal, whereas the leader in 1983/1984 was soybean oil. There is, however, a seasonal pattern of note which can be of some assistance in trading these spreads. Soybean meal will tend to be strong relative to oil late in the year and into January and again in mid-summer. Oil tends to be strongest relative to meal in April. These spreads will, however, oscillate constantly as they are a favored trading vehicle of many floor traders and will tend to be influenced every few weeks by such traders either buying meal and selling oil or vice versa.

The Crush and Reverse Crush must be noted here as well. Here too, a lengthy treatise could be presented on these relationships alone. The crush relationship is based on one bushel of soybeans (weighing approximately 60 lbs.) yielding 11 lbs. of soybean oil and 48 lbs. of soybean meal. The crush spread is, therefore, being "long" (buying) ten contracts (50 thousand bushels or three million pounds) of soybeans versus being short (selling) 9 contracts (540,000 lbs.) of soybean oil and 12 contracts (2,400,000 lbs.) of soybean meal. The ratio is close enough, however, that many traders will use one contract of soybeans versus one of oil and one of meal (300,000 lbs. of beans versus 60,000 lbs of oil and 200,000 lbs. of meal) though this favors oil over meal somewhat as well as beans somewhat over products. The reverse crush involves buying the products and selling the beans. These spreads have also traversed wide ranges over the past decade from a soybean premium to more than $1.00 in favor of products. Most of the time, the crush relationships run between 20 cents and 45 cents premium products. Beans tend to be favored over products into spring and products favored into mid-winter. The trader will consider the crush spread early in the year and particularly when the crush margins are above 45 cents and will consider the most favored posture, the reverse crush, whenever crush margins are below 25 cents and preferably near mid-year or later.

Summary

The soybean complex offers something for every type of spreader be he or she aggressive or conservative, speculative or hedge. There is a plethora of trades of varying complexity and volatility available on a regular basis to all traders. The seasonal reliability of relationships within the soybean complex—specifically September versus November, January versus July, and May versus August soybeans, January versus May soybean meal, and December versus May soybean oil make these spreads particularly attractive.

The trader must have some knowledge of soybean fundamentals—especially deliverable stocks and carryout stocks. A working knowledge of carrying charges is vital as is a conceptual grasp of historical values in order to recognize when prices are relatively cheap or expensive. Some method of tracking spread behavior such as the close-only spread chart is also recommended.

The well prepared spread trader, armed with the appropriate analytical tools, and associated with a broker that both understands and encourages spread trading, should enjoy the profit potential of the relationships within the soybean complex throughout the year.

THE CRB FUTURES PRICE INDEX—A "BASKET OF 27 COMMODITIES" THAT MAY SOON BE A FUTURES CONTRACT

BY STEPHEN W. COX

For many years, stock market traders were fond of pointing out that "You can't trade the averages." In the past two years, however, this bit of trade wisdom has been rendered obsolete by the advent of trading in stock market index futures. Stock market index futures and options on these indices and futures contracts have presented securities traders with the opportunity to hedge their portfolios, thereby "legitimizing" a concept that at first seemed radical to those who thought of futures markets only in terms of tangible commodities.

This year, the concept of trading index futures has been extended another logical step by the prospect of a futures market based on the Commodity Research Bureau's widely followed Index of 27 futures markets. The New York Futures Exchange (NYFE), the futures trading arm of the New York Stock Exchange, has applied to the *Commodity Futures Trading Commission* for permission to trade futures contracts on the CRB Futures Price Index. This paper describes the CRB Index in terms of historical data and how it helps traders and economists with their projections. Considerable attention is focused on the hedge opportunities that would be provided by a new futures contract.

1. The CRB Futures Price Index

The CRB Index, first published 27 years ago, has become the accepted standard for measuring the commodity futures price level and is now widely disseminated. The CRB Index is carried daily in many financial columns, including the *New York Times* and the *Journal of Commerce,* and it is transmitted daily over the *Associated Press* and other leading newswires. A Commodity Research Bureau publication, the CRB Commodity Index Report, is subscribed to by some of the most famous business economists in the U.S., as well as foreign and U.S. governmental agencies, including the various offices of the Federal Reserve system.

The 27 commodities that make up the CRB Index are listed below. Chicago and Minneapolis wheat are considered as two commodities. Each represents a different kind of wheat for different markets. It will be noted that silver and platinum appear in both the Precious Metals group and the Industrials, but are only counted once in the overall index.

Grains	barley, corn, oats, rye, soybean meal, Chicago wheat, and Minneapolis wheat
Oilseeds	flaxseed, soybeans, rapeseed
Livestock & Meats	cattle, hogs, and pork bellies
Industrial	cotton, copper, crude oil, lumber, platinum, and silver
Precious Metals	gold, platinum, and silver
Imported	cocoa, coffee, and world sugar #11
Miscellaneous	soybean oil, orange juice, potatoes, and heating oil

The CRB Index (1967 = 100) is an unweighted geometric mean of the individual price relatives of 27 commodity futures prices. In other words, it is the ratio of the current price to the 1967 annual average price of each commodity. The current price value in the index for each commodity is found by averaging all futures contracts up to, but not including, those that mature twelve months in advance of the present date.

Since it was first published in 1957, the CRB Index has been revised at times, in recognition of the demise of old futures markets and the birth of potentially important new futures contracts. Early this year, prices for grease wool, broilers, and eggs (the futures markets for which had become inactive), were deleted from the CRB Index and replaced with the very active gold, heating oil, and crude oil futures markets. Because the prices of these latter three commodities had been under direct or indirect governmental controls in 1967, the base year of the CRB Index, their individual base prices were assumed to be the same as the overall index in the first week of December 1983.

The inclusion of gold, heating oil, and crude oil in the CRB Index was the first significant change that had been made in the CRB Index since early in 1973 when as many as nine commodities were either dropped or added to the Index to reflect the changing character of futures markets.

The revised index (as of Jan. 9, 1984) has been compared with the previous index on a daily basis for over six months, and it is evident that the new index moves in close harmony with the old index. This is not surprising in light of our long range studies which show that there is a strong interrelationship among all commodities. Although the CRB Futures Price Index has undergone a number of changes in 27 years, it has continued to correlate very closely with the BLS Index (now CRB Spot Commodity Price Index) during all those years. Of the 23 commodities that make up the spot index, 14 are entirely unrelated to the 27 commodities in the CRB Futures Index. Therefore, the historical study of the prerevised futures index below should provide valid cor-

Grains	barley, corn, oats, rye, soybean meal, Chicago wheat, and Minneapolis wheat
Fats & Oils	soybean oil
Oilseeds	flaxseed, soybeans, and rapeseed
Livestock & Meats	broilers, live cattle, hogs, and pork bellies
Textiles	cotton and wool
Industrials	copper, platinum, silver, plywood, cotton$_1$ and wool$_1$
Metals	platinum$_1$, silver$_1$, copper$_1$
Imported	cocoa, coffee, sugar #11, wool$_1$
Miscellaneous	potatoes, orange juice, eggs

relations and comparisons with other economic measures. The commodities in this older index are listed in their previous groups. The foot-noted commodities appear in more than one group, but are only counted once in the composite CRB Index.

It should be noted that lumber replaced plywood in November, 1983. Studies at the time showed that this change caused only extremely small variations in this index.

Figure 1 following, presents in descending order correlation coefficients between the older CRB Index and its major subgroups. The coefficients are figured on an actual level basis over the two-year period between January 1982 and December 1983. The subgroups correlated most closely with the CRB Index were agriculturals, which make up 16 out of the 27 constituent commodities in the CRB Index. Undoubtedly, the high correlation between the Grains Group and the CRB Index can be attributed partly to the large number of grains within the Index.

Fig. 1

Correlation Coefficients (actual levels) between the CRB Index and various subindices (1967=100)	1/1/82 – 12/20/83
1. Grains	0.898
2. Oilseeds	0.888
3. Imported	0.767
4. Miscellaneous	0.722
5. Industrials	0.376
6. Metals	0.253
7. Livestock & Meats	−0.154

Note that the correlation coefficients in the tabulation in Figure 1 fall off significantly from 0.722 for Miscellaneous to 0.376 for Industrials. The point between relatively good and relatively poor correlations seems also to mark a difference in the character of the commodities that make up the CRB Index. That is, the first four subindices listed are composed of commodities that are closer to being finished consumer goods than are the commodities in the Industrials and the Metals subindices, both of which appear to correlate poorly with the CRB Index.

The two years accounted for in Fig. 1 could be described as a downtrend period for both long and short-term interest rates. It is possible that generally falling interest rates kept the demand for "hard" goods relatively less weak during the '82–'83 period. This might explain the tendency of the Industrials and the Metals to appear to move out of step with the overall commodity price level during '82–'83 (see Figs. 4–10 on pages 42 and 43).

The single exception to this observation that agricultural commodity prices correlated most closely with the CRB Index is, obviously, the Livestock & Meats subindex, that, according to Fig. 1, registered a slight reverse correlation with the CRB Index. This minor negative correlation is perhaps a reflection of the fact that feedgrains (which tend to move in tandem with food grains) are a cost of the production of livestock. Therefore, in the short run (influenced by physiological limits imposed by varying breeding and feeding periods for livestock), increases in grain prices can result in forcing sales of livestock and temporary price weakness; the average 18-month breeding time for market ready livestock fits neatly into the two-year period under consideration. To a certain extent, the slight negative correlation between the Livestock & Meats subindex and the CRB Index may reflect the competition for the consumer dollar between meats and other foodstuffs represented in the first four subindices listed in Fig. 1. However, visual chart studies show that there is a closer correlation in the actual movement of the index and subgroups. Longer range, they have maintained their price relationship.

Because futures prices are determined by traders' expectations, the CRB Index is an illuminating indicator of the supply and demand for both commodities and their various by-products. As a measurement of overall commodity price level, the CRB Index implies anticipated fluctuations in the purchasing power of the dollar. Seasoned commodity traders have often witnessed price movements that were not readily explicable in terms of the changes in the supply/demand fundamentals of any particular market. Thus, it is reasonable to expect that the overall price trend of the commodities markets, as reflected by the CRB Index, will have an important influence on the price movements of individual commodities.

2. Commodity Prices and the Overall Price Level

As Section 6 will show in greater detail, commodity prices have been sensitive to an underlying upward vector that has pushed the prices for raw materials and foodstuffs ever higher throughout the Bust-Boom periods that have characterized our economy over the past decade and a half. A glance at Fig. 2 confirms that, since 1970, the CRB Index has been in a significant downtrend only once—an extended reaction to its advance to an all-time high of 337.6 (achieved on November 20, 1980).

Recent studies suggest a reliability (always, of course, qualified by the fact of speculative risk) in the behavior of commodity prices that might be successfully exploited by hedgers eager to protect their investments against fluctuations in the prices for their goods or services.

Figs. 2 and 3 show the CRB Index plotted against the Consumer Price Index (CPI, retail, all items, urban consumers, not seasonally adjusted, 1967=100) and the Producer Price Index (PPI). Despite the more irregular fluctuations in the CRB Index, Figs. 2 and 3 seem to belie a correlation between the three indices that is borne out by the following correlation coefficients run by the New York Futures Exchange:

	1/31/70–12/31/83
Correlation (on actual levels) between CRB Index and CPI	0.831
Correlation (on actual levels) between CRB Index and PPI	0.882

The incredible inflationary pressure that hit the commodities markets in the early '70s was generally an outcome of long term monetary expansion attendant upon the Vietnam War (M1 peaked in late 1972 as the war was being wound down), and of a sudden increase in foreign demand for American commodities that followed a dollar devaluation in 1971. There also was a surge of Russian buying of U.S. grains because of crop problems. As can be seen from Figs. 2

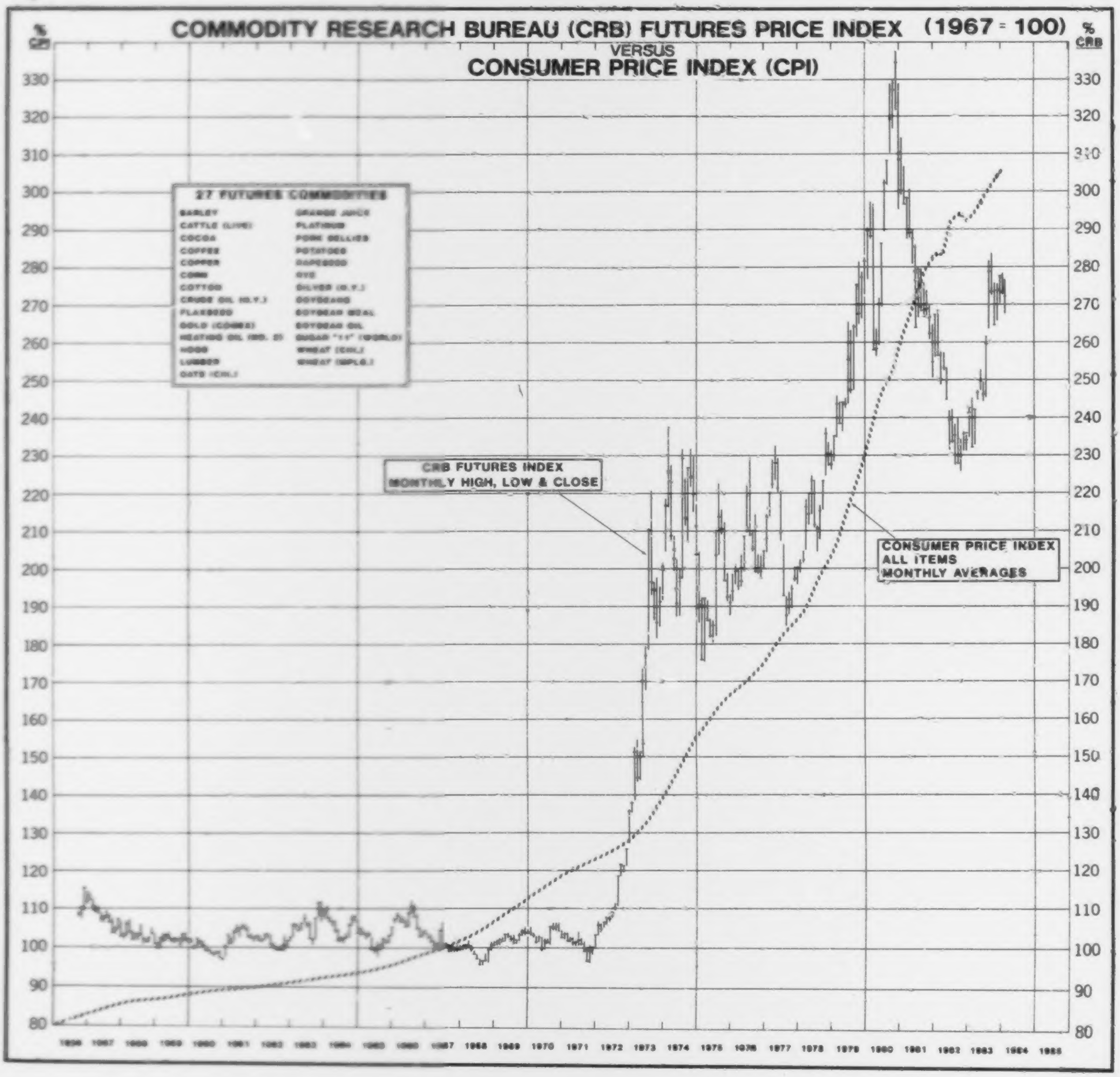
and 3, the futures markets anticipated a continuation of these inflation effects that failed to materialize, thus precipitating the decline in the CRB Index from its late-1980 peak toward a more normal relationship with both the CPI and the PPI.

Futures prices have a pronounced tendency to anticipate changes in the value of the dollar, and, therefore a CRB Index futures contract (which would be calculated on a minute-by-minute basis) would be a source of economic information with an advantage over most economic indicators now calculated on a monthly basis. A CRB Index futures market would enhance judgments of the inflation rate and of the proper relationships (analogous to spread relationships) between prices in the various sectors of the economy.

It is conceivable that businesses—most likely, businesses that operate on a very large scale—could employ a CRB Index futures contract to hedge long-term inflationary effects, thus protecting themselves against the distortions in inventory costs and the resulting illusory profits that come about because of monetary depreciation.

Despite the problems that such a simply conceived use of the CRB Index futures market would admittedly have to confront (the continued rolling over of positions in order to provide a long-term inflation hedge for example), it is possible that any business entity that routinely holds a "basket" of commodities could hedge even short-term price movements with a position in CRB Index contracts proportional and opposite to its net exposure in the cash markets for

fig: 2



the commodities that it must purchase continually.

In this connection, a buyer in charge of purchasing a regular commodity input for his firm could use a CRB Index futures market in order to play off the historical spread relationships between a particular futures market and the overall commodity price level. For example, despite the usual close correlation between the CRB Index and oilseed futures prices (see Figs. 1 and 5), the spread between the March 1984 soybean contract and the CRB Index widened sharply from about 396 (640–244) in July to around 706 (990–284) in September at the height of the 1983 drought-induced runup in the futures prices for both grains and oilseeds. It is possible that an astute hedger would have been forewarned of the subsequent downturn in soybean futures by the extent of the widening of the spread between soybean prices and the overall commodity price level as measured by the CRB Index.

3. *Potential Hedging Uses*

Both speculative and hedger interest in a CRB Index futures contract is in a large degree heightened by the need to reduce the risk of operating in a climate of broad inflationary and deflationary price swings that have characterized the world economy for the past several decades. Because the CRB Index has proved to be a reliable indicator of the rate of change in the Consumer Price Index and a measure of the purchasing power of the dollar, it can be used as a hedging device for reducing some major economic risks. Moreover, it tracks well against a variety of economic indicators and therefore may serve as a hedge against dislocating swings within the business cycle.

The question of which futures market participants might find a hedging use for the proposed CRB Index futures contract can be answered generally: first and foremost are the holders of hard assets who have a desperate need to protect their assets from the ravages of inflation. They include individuals, pension funds, trust funds, insurance companies and financial institutions, and also those whose day-to-day operations involve the necessity of carrying a large, diverse position in the commodities markets, either cash or futures.

A decade or more ago, most pension funds and trusts concentrated on fixed annuities or U.S. government securities and municipal bonds. Retirement and other funds now usually include a percentage of "equities" in addition to conservative bonds with fixed returns. Deciding on the ingredients of the "mix" was a continuing problem.

fig: 3

CRB FUTURES INDEX (LINE) vs.
PRODUCER PRICE INDEX - TOTAL NONDURABLE GOODS (DOT)

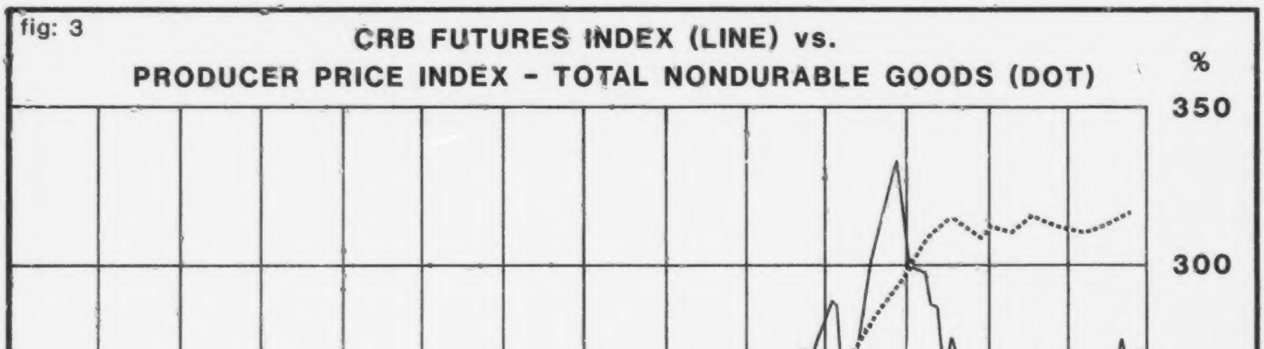
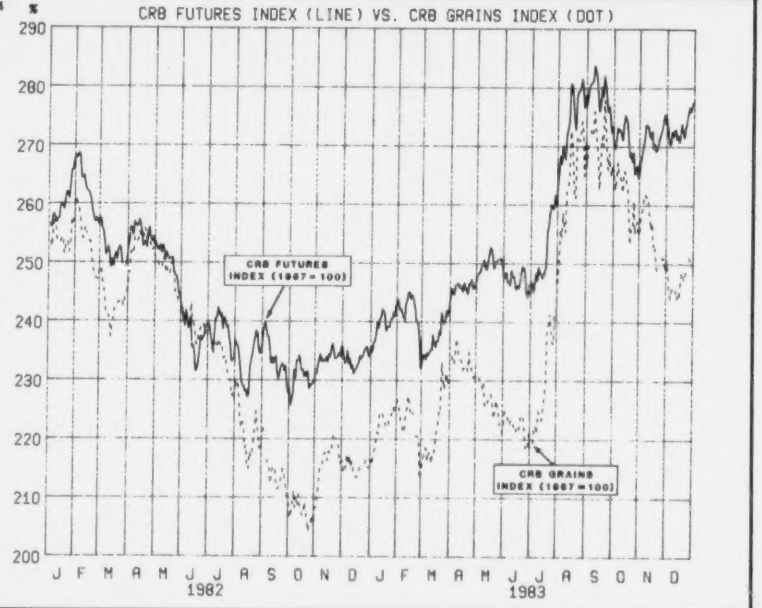
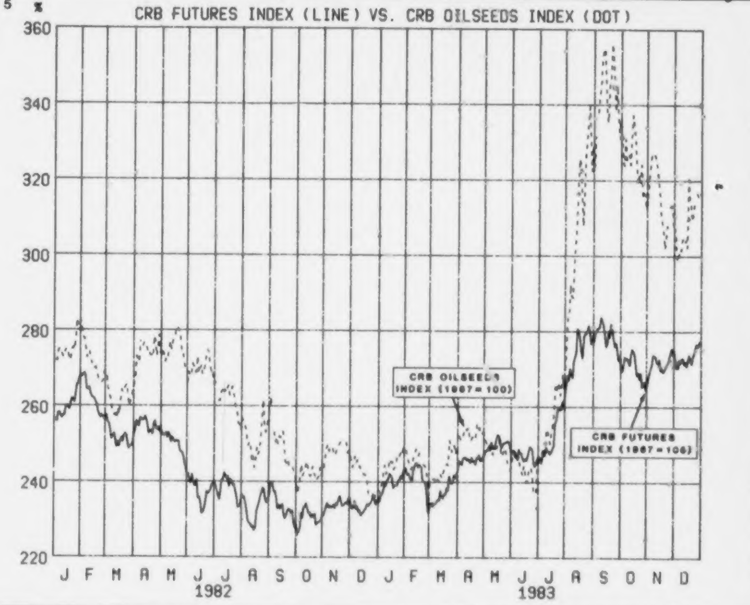


fig: 4



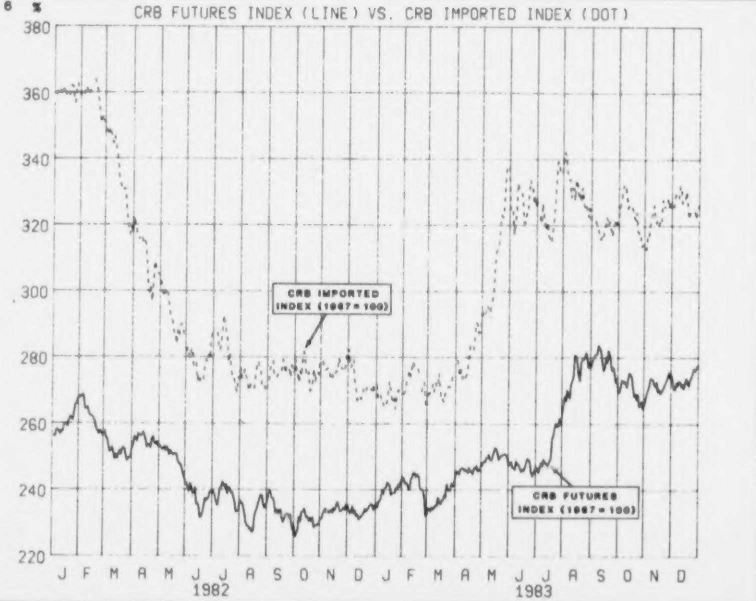
CRB FUTURES INDEX (LINE) VS. CRB GRAINS INDEX (DOT)

fig: 5



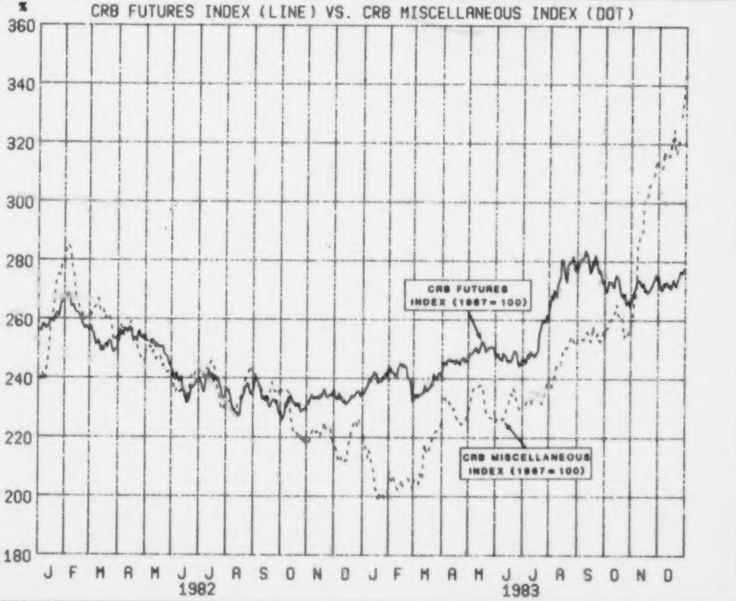
CRB FUTURES INDEX (LINE) VS. CRB OILSEEDS INDEX (DOT)

fig: 6



CRB FUTURES INDEX (LINE) VS. CRB IMPORTED INDEX (DOT)

fig: 7



CRB FUTURES INDEX (LINE) VS. CRB MISCELLANEOUS INDEX (DOT)

fig: 8

CRB FUTURES INDEX (LINE) VS. CRB INDUSTRY INDEX (DOT)

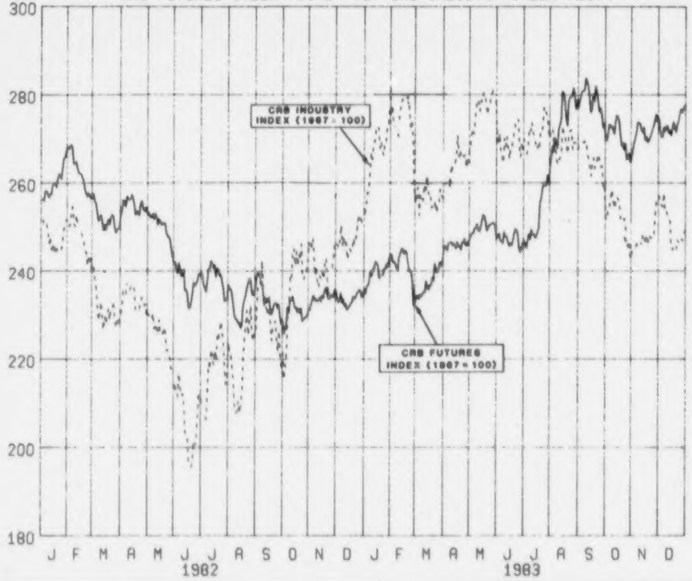


fig: 9

CRB FUTURES INDEX (LINE) VS. CRB METALS INDEX (DOT)

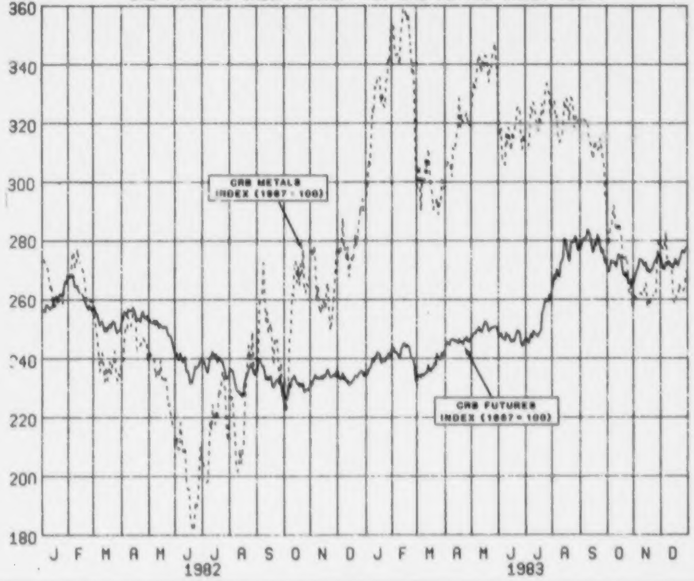


fig: 10

CRB FUTURES INDEX (LINE) VS. CRB LIVESTOCK & MEATS INDEX (DOT)

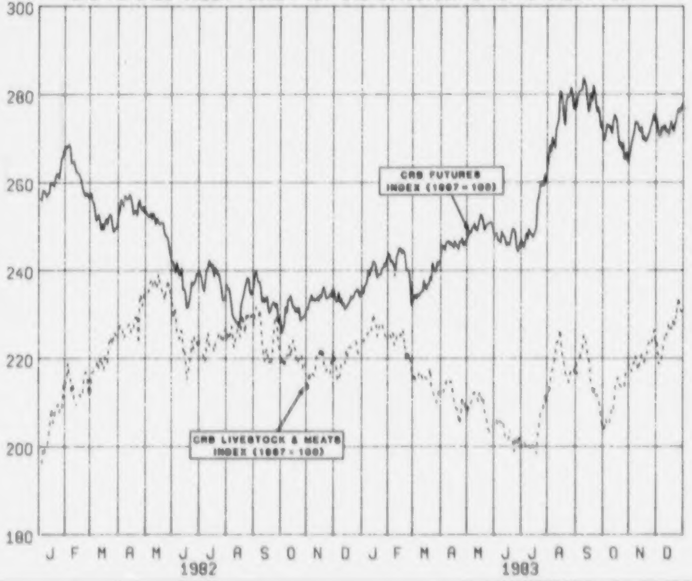


fig: 11

CRB FUTURES INDEX (LINE) VS.
INDUSTRIAL PRODUCTION INDEX - DURABLE MANUFACTURING (DOT)

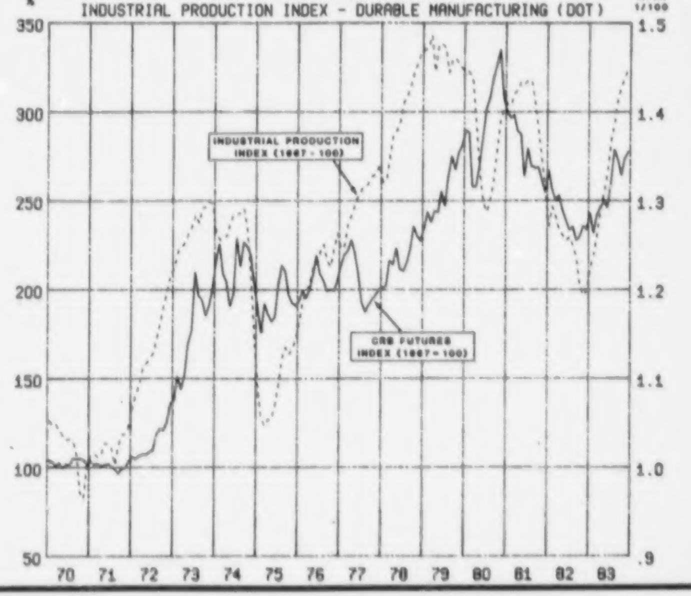
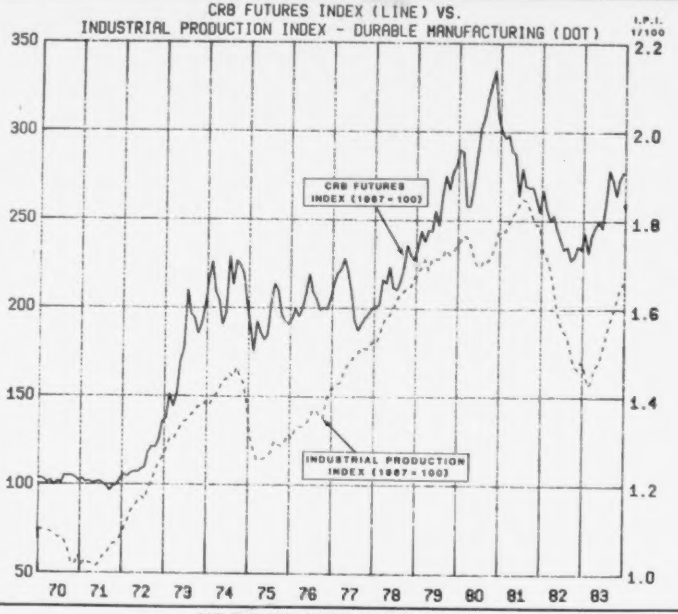
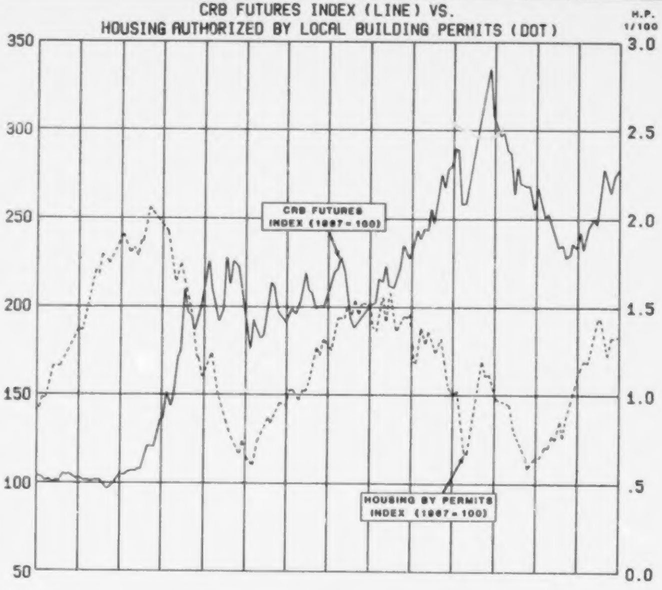


fig: 12



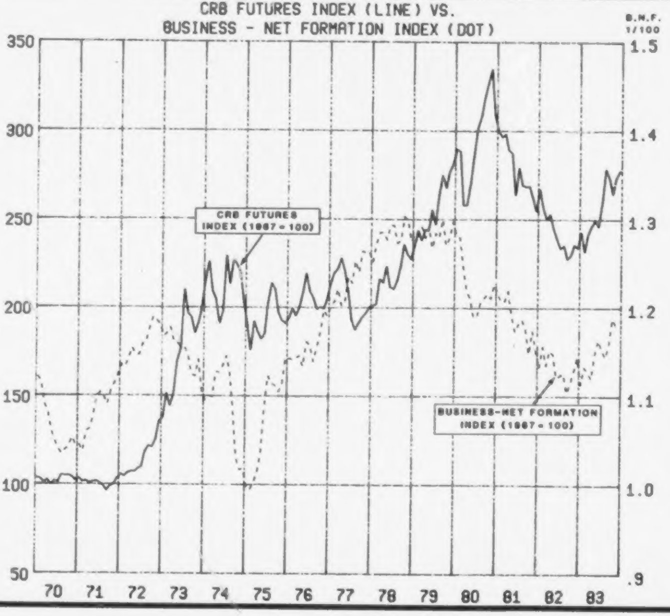
CRB FUTURES INDEX (LINE) VS.
INDUSTRIAL PRODUCTION INDEX - DURABLE MANUFACTURING (DOT)

fig: 13



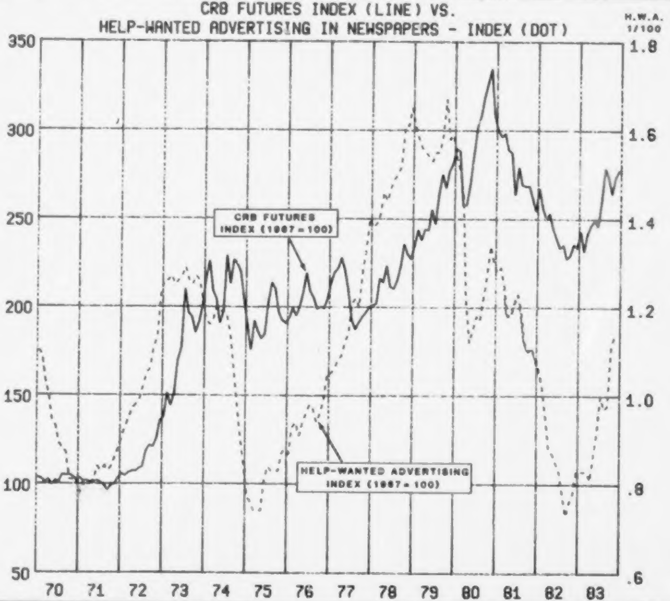
CRB FUTURES INDEX (LINE) VS.
HOUSING AUTHORIZED BY LOCAL BUILDING PERMITS (DOT)

fig: 14



CRB FUTURES INDEX (LINE) VS.
BUSINESS - NET FORMATION INDEX (DOT)

fig: 15



CRB FUTURES INDEX (LINE) VS.
HELP-WANTED ADVERTISING IN NEWSPAPERS - INDEX (DOT)

Illustrative of the "mix" problem is the dilemma of an individual we will call Mr. X. He is approaching retirement and has accumulated assets totaling $500,000. He would be happy if he could put it all into U.S. government bonds and be assured of a minimum annual income of about $50,000 for the balance of his life without disturbing capital. However, he is fearful that inflation will inevitably reduce the purchasing power of his annual $50,000 income. (He has seen it happen to others during the past two decades or more of inflation.)

Mr. X decides that he should keep about half of his $500,000 in U.S. governments to insure a definite income, and put half into equities that should logically increase in value with the ongoing year-to-year progress of inflation. Now comes the big problem. What should the equity "mix" include in addition to his government bonds? Various types of equities have been suggested, including common stocks, precious metals, real estate and "collectables" such as antiques, paintings and rare coins.

Unfortunately, experience has demonstrated that there are too many flaws in all of the aforementioned "hedges." Common stocks have provided partial help, but are considered unreliable hedges because it is too easy to pick the wrong stock even though the stock may be a logical "hedge candidate" because of the company's vast raw materials holdings, such as petroleum or timber. Too much depends on individual management decisions, industry conditions and cyclical factors. Dependence on precious metals has proven disastrous to many. For example, in 1983 silver dropped from $14 to $8 at year-end and the price of gold declined by $80 an ounce—from $450 to $370. Real estate has been an excellent hedge when the investment has been concentrated in "hot areas." However, land and buildings in some U.S. areas have declined in value and illiquidity has been a problem. The "collectables" have not been a practical solution because expert knowledge is essential for making the right purchases at good prices.

The history of classic inflations of large economies such as the Chinese, French and German experiences has proved that commodities, by far, have been the best hedges of all. However, in recent years, those who have selected specific commodities for inflation hedging have encountered serious problems and some substantial losses. The reason is that each individual commodity market is influenced by different developments such as changing supply due to weather, or fluctuations in demand within a specific industry. For example, during 1983 the price of pork bellies declined from 80¢ to 65¢, while cotton moved up from 66¢ to 78¢ and corn was advancing from $2.40 to $3.40.

During this same year of 1983, the Commodity Research Bureau Index (27 commodities) advanced almost 16%, from 234 to 278 (1967=100). Mr. X has one important question about the CRB Index as an inflation hedge. Although the Index has moved progressively higher vs. its 1967 base of 100, the advance has been within an upward channel with intermittent highs and lows. In other words, the fluctuations on a chart may be compared to the jagged teeth of a saw. What if Mr. X makes his purchase of Index futures at the high point of the upward channel? One answer to this specific problem is to consider a program similar to what is known as "dollar cost averaging" in the stock market. If you are accumulating shares of a stock which you consider to have great long term potential, you buy equal amounts of the stock on, say the first of each month, so that you are assured of a good average price. This idea should make sense to Mr. X (and for pension funds and trusts). He establishes an initial position on a selected date and then adds to the position at regular intervals.

Another "plus" for utilization of the CRB Index is that Mr. X can "have his cake and eat it." He can keep his half-million dollars all in government bonds and collect his $50,000 per year while concurrently building up a position in CRB Index futures. The reason is that futures market commitments are akin to options, to be settled based on prevailing prices at certain future dates. This kind of leveraged "investment" does not require traditional financing, i.e., putting up money for the full value of the equities (commodities) involved. Thus, Mr. X can "buy" a half-million dollars worth of commodities (CRB Index futures) by putting up U.S. government bonds as "good faith margin," to be held by the broker but still owned by Mr. X.

4. Funds and Pools

Managed commodity and other futures funds and pools are one of the fastest growing segments of the futures industry. In 1983, there were a record 52 public futures funds that completed the trading year (and 6 suspensions). By March of 1984, the number of actual public funds had ballooned to 78. These funds represent a huge pool of new speculative money, which is truly a new phenomenon for the futures industry. Many of the investors in these funds are just hoping for a speculative profit, but surveys indicate that most fund buyers are hoping to protect themselves from inflation. As it turned out, 1983 was a dismal year for the performance of the fund industry.

During 1983, the CRB Index jumped nearly 52 percentage points between February and September, before turning around into a steep downtrend and retracing almost 50% of the previous bull move. These dizzying fluctuations in the overall level of commodity futures prices reflected the push-pull influences of sharp crop reductions due to the newly-instituted PIK program; a record-breaking heat wave in the summer that caught both the U.S. corn and soybean crops in their crucial pollination stages; and, subsequent record cold temperatures that sent livestock and meat prices to new highs and disrupted barge traffic as well as the incipient harvesting activity in many areas of the U.S. Meanwhile, the strength of the dollar discouraged U.S. exports and tended to keep a lid on the futures prices for American goods exported overseas, while precious metals prices and the price of copper fell into steep, extended bear markets.

The crosscurrents in futures market prices that prevailed at the end of 1983 can be inferred from the fact that in January of 1984, three of the futures markets represented in the CRB Index touched contract lows (copper, gold, and sugar), and four markets included in the CRB Index (cattle, hogs, cocoa, and orange juice) established contract highs following sharp uptrends that had begun in late 1983.

The *Managed Accounts Report* (Columbia, Maryland), the leading publication of the futures fund industry reported that of the 52 public funds that traded throughout 1983, only 12 funds posted winning records. Their average profit for the year was 14.9%. The great majority—40 public funds—lost an average of 17.9%. Another industry source, Norwood Securities reported that 52 of the 59 funds in the *Norwood Index* that traded in 1983 (some for part of the year), showed losses. During the year, 6 funds were suspended. Of these, 3 were dissolved but 2 resumed trading in early 1984.

Commodity funds' managers generally attributed the funds' poor showing to "choppy" markets and the most unusual weather developments in 1983 which caused unpredictable and rather violent price moves. It is clear, however, that there was no classical hedge vehicle for a broad portfolio of futures contracts available to commodity fund managers that could have enabled them to reduce the extreme risks of their business such as the securities fund managers have in stock indices and financial futures.

The CRB Index Futures contract could fill this need for transferring the risks of managing a large amount of money in the highly developed futures markets. A fund manager could take a position in CRB Index futures proportional and opposite to the net long or short position of his fund. Several studies indicate that overall market performance in recent years would have improved. It is interesting to note that if all 72 public funds had long-hedged the CRB Futures Index in January 1983 and lifted their hedges in December, they would have profits that were probably quite substantial. The Index appreciated over 16%, and considering the leverage factor of 10 to 20 times (depending on the fund's strategy), this seems a valid assumption.

All reasoning advanced in behalf of hedging in the already-existing futures markets, including the minimization of risk and the consequent reduction of costs, can be applied to commodity fund managers who would have the opportunity of utilizing CRB Index futures contracts in their management strategies. Similarly, the existence of a CRB Index futures contract would result in reduced costs to the investing public.

It is appropriate to mention here that some observers of the futures markets have expressed misgivings about what they believe to be the inordinate influence that commodity funds have on short-term futures market price movements because of the huge amount of the funds' dollar investments and a manager's need to accumulate and to liquidate very large futures positions in a very short time. Because it is believed that many of the funds' futures positions are initiated automatically by computer, commodity funds can generate highly erratic fluctuations in individual futures markets at times. To the extent to which this belief is well-founded, it is likely that the existence of a CRB Index futures contract, by providing greater protection and security for the funds' futures portfolios, will greatly lessen the swings in price that could follow when the funds enter the market or exit hastily. A CRB Index futures market, by creating a logical hedge vehicle for those holding commodity futures portfolios, might even help transform some commodity funds and pools from speculators into classical hedgers.

5. Commodity Prices and Industrial Production

	1/31/70–12/31/83
Correlation (on actual levels) between the CRB Index and the Index of Industrial Production, Nondurable Manufactures 1967=100	0.889
Correlation (on actual levels) between the CRB Index and the Index of Industrial Production, Durable Manufactures, 1967=100	0.821
Correlation (on actual levels) between the CRB Index and the Index of Industrial Production, Business Equipment 1967=100	0.928

These three indices of industrial production, all of which measure the production of heavy capital equipment, show a strong long-term correlation with commodity prices as measured by the CRB Index. Figs. 11 and 12 indicate that, at the same time, commodity prices tend to take a slight lead over movements in industrial production. Perhaps the key to this strong correlation is the fact that the production of capital equipment may be economically determined by the prices for commodities. Thus, to use a textbook example, the price for wheat retroactively determines the prices and the production of capital goods (machinery, fuel, tools, etc.) instrumental in the production of wheat products. A judgment that the prices for various commodities will move higher will probably call forth a greater demand for the capital with which to produce those commodities; conversely, a decline in commodity prices will tend to bring about a similar decline in capital goods production.

The marked correlation between the CRB Index and industrial production best points up the reliability of the CRB Index as a broad economic indicator. By giving signals of possible changes in industrial activity, a CRB Index futures market would be a valuable disseminator of economic information to the public.

6. Commodity Prices and the Business Cycle

The early boom phase of the business cycle is characterized by generally easy money, falling interest rates, and a gradual upward movement in the overall price level. Spending on more capital-intensive production projects follows as a natural consequence of expanded credit, with the result that entrepreneurs in the capital goods industries are now willing to bid higher wage rates. Increased consumer spending tends to bring about a similar response from employers in consumer goods industries. Sales rise, inventories begin to be drawn down at more rapid rates, and the clamor for credit of all types increases, resulting in increased sales of goods normally bought on credit (notably houses and automobiles).

The merchant or entrepreneur in the midst of all this economic euphoria may or may not be prepared for the inkling that things are beginning to turn sour. Inexorably, disturbing losses begin to show up on the business ledgers, most noticeably on the books kept by heavy industry. Inventories may not be moving at the expected rate of the past few months or couple of years. Credit is now quite a bit tighter, and perhaps it is now time for employers to confront the painful decision to lay off workers.

An exhaustive study of the roots of the business cycle is out of the scope of this article. It should be emphasized that the comparison of selected economic indicators in the text following is not intended to imply any cause-effect relationship among the various indicators although such relationships assuredly exist. The following tables describe historical relationships which seemed to prevail over a selected period of time—relationships which could conceivably change in the future.

The point is that an historical relationship would be of paramount importance to a business considering the use of a CRB Index futures contract as a hedge against the price fluctuations inherent in the business cycle—witness the concern with figuring historical basis relationships that preoccupies farmers, producers, and manufacturers who use the established futures markets for their hedging activities. As is the case for these hedgers, the basis relationships pertinent to each hedger in a CRB Index futures market will undoubtedly be a unique concern.

The U.S. Department of Commerce Bureau of Economic Analysis has isolated and defined four major business cycles (Cycle IV not completed) that have taken place since the beginning of the 1970's, a period notable for extreme volatility in the commodity price level. In Fig. 16, a monthly high-low-close chart of the CRB Index is overlayed with bands representing the "Bust and Boom" phases of these four cycles beginning with a shaded band representing the decline in business activity from peak levels registered in December 1969:

	Peak	Trough	Peak
CYCLE I	Dec. '69	Nov. '70	Nov. '73
CYCLE II	Nov. '73	Mar. '75	Jan. '80
CYCLE III	Jan. '80	July '80	July '81
CYCLE IV	July '81	Nov. '82	Nov. '83 (Boom in progress)

Each cycle is made up of a Bust phase, during which business activity declines from a peak into a trough or low point, from which activity inevitably recovers in a so-called Boom phase and swings up into a new peak. The longest of these four business cycles measured nearly six years from peak to peak; the shortest similarly measured a year and a half. This does not include Cycle IV which has not peaked. The Nov. '83 date is based on latest available data.

A closer "cross-sectional" view of these four business cycles can be derived from the behavior during these Bust-Boom phases of nine economic indicators routinely employed by the U.S. Department of Commerce Bureau of Economic Analysis. Each of these indicators is an index of an important sector of the economy that is closely monitored for evidence of the turning points in a business cycle, including industrial production, business formation, housing, employment and money supply.

All of the following ten indicators, with the exception of the CRB Futures Price Index and the CRB (BLS-formula) Spot Price Index of 23 Commodities, are seasonally adjusted. With the exception of M1 money supply, all of the indicators are indices figured as a percentage of 1967=100:

Indicator	Type
[1]M1 Money Supply (in billions of 1972 $)	Leading
[2]Index of New Private Housing Units Authorized by Local Building Permits (1967=100)	Leading
[3]Index of Net Business Formation (1967=100)	Leading
[4]Index of Industrial Production, Business Equipment (1967=100)	Leading
[5]Index of Industrial Production, Non-durable Manufactures (1967=100)	Leading
[6]Index of Industrial Production, Durable Manufactures (1967=100)	Coincident
[7]Index of Help-Wanted Advertising in Newspapers (1967=100)	Unclassified
[8]Index of Labor Cost per Unit of Output, Total Manufacturing (1967=100)	Lagging
[9]CRB (BLS-formula) Index of Spot Prices, 23 Commodities (1967=100) (end of month)	
CRB Futures Price Index (1967=100) (end of month)	

See footnotes on page 53.

In Tables 1–4 following, each of the four business cycles under consideration here is presented in two parts: A Bust phase and a Boom phase as defined by the U.S. Department of Commerce. Each phase of a cycle generates a peak and a trough value for each of the above ten indicators. These values have been recorded in the Tables 1–4 and the percentage changes have been computed for purposes of comparison. The Department of Commerce indicators tagged as "Leading" generally tend to lead all of the swings of the business cycle, whereas the "Lagging" indicators as a rule tend to fall behind such swings; the Index of Help-Wanted Ads in Newspapers is "Unclassified" because it lacks any observable relation to the cyclical swings.

What is readily apparent from each of Tables 1–4 is the buoyancy of commodity prices, especially as registered by the CRB Index, relative to the other economic indicators throughout Bust and Boom. Roughly speaking, during the Bust phases of the cycles under consideration, the CRB Index tended to swim against the negative tide, registering some of the smallest percentage changes (either up or down) compared with the non-commodity indicators. At the same time, during the four Boom phases, percentage

TABLE 1.
Cycle I (Dec. '69–Nov. '73)

Indicator	Type	Bust			Boom		
		Peak (12/69)	Trough (11/70)	%	Trough (11/70)	Peak (11/73)	%
M1 Money Supply (in billions of 1972 $)	Leading	228.4	227.8	−0.3	227.8	240.3	+5
Index of New Pvt. Housing Units Authorized by Local Building Permits (1967=100)	Leading	101.3	131.7	+30	131.7	120.8	−8
Index of Net Business Formation (1967=100)	Leading	112.8	104.4	−7	104.4	114.1	+9
Index of Industrial Production, Business Equipment (1967=100)	Leading	112.2	102.0	−9	102.0	137.8	+35
Index of Industrial Production, Non-durable Manufactures (1967=100)	Leading	112.8	111.9	−1	111.9	135.1	+21
Index of Industrial Production, Durable Manufactures (1967=100)	Coincident	109.0	96.5	−11	96.5	129.8	+35
Index of Help-Wanted Advertising in Newspapers (1967=100)	Unclassified	115	81	−30	81	126	+56
Index of Labor Cost per Unit of Output, Total Manufacturing (1967=100)	Lagging	109.8	112.8	+3	112.8	119.9	+6
CRB (BLS-formula) Index of Spot Prices, 23 Commodities (1967=100) (end of month)		114.9	108.7	−6	108.7	192.1	+77
CRB Futures Price Index (1967=100) (end of month)		103.9	104.3	+0.4	104.3	191.3	+83

changes in the CRB Index were some of the widest recorded among the indicators.

The salient points of tables 1–4 are condensed into Table 5 on page 53. Table 5 shows the percentage change (again, either up or down) in each indicator averaged first over the four Bust phases and then over the four corresponding Boom phases of the four cycles. Table 5 also records the number of times an indicator fluctuated to the upside or to the downside during Bust and Boom phases.

Specifically, during the Bust phases of the four major business cycles recorded since 1970, the CRB Index fluctuated to the upside three out of four times, the average fluctuation up or down being only 5.2% (compared with the next least-volatile indicator, the Index of Production for Non-durable Manufactures, which fluctuated an average of 7.25% and spent all of its time on the downside during Bust phases).

On the other hand, during the four Boom phases, the CRB Index was once again on the upside, three out of four times. But now, the CRB Index's average fluctuations up or down had widened significantly to 39.25% (compared with the Index of New Private Housing Units, the next most-volatile non-commodity indicator, which fluctuated by 34.25% on the average and was on the upside during two out of the four Boom phases).

7. Commodities and Housing

	1/31/70–12/31/83
Correlation (on actual levels) between the CRB Index and the Index of New Private Housing Authorized by Local Building Permits (1967=100)	−0.554

This long-term inverse relationship between the commodity price level and housing starts is plainly revealed in Fig. 13. The significant housing boom of the beginning of the '70s was fueled by an expanding money supply, low interest rates, and a stable commodity price level as measured by the sideways movement in the CRB Index. Then, in 1972, the commodity price level virtually exploded on the upside. The latent effect of easy money may have been a background factor, but the steep advance in the CRB Index was sparked by extremely poor crop production in Eastern Europe and huge Russian purchases of U.S. grains. The inflationary commodity price spiral led to Fed monetary tightening and higher interest rates that sent the housing market into a tailspin. The resulting recession then caused commodity prices to decline. This pattern was repeated time after time through the rest of the 70's and into the 80's. What appears to be a bad correlation turns out to be a very good reverse correlation or even a good direct correlation when time lags are properly entered into the equation. This tendency for the commodity price level and the level of new housing to move "out of synch" points up the double-edged nature of inflationary monetary expansion. Easy money is invariably attended by falling interest rates in its early stages. This can stimulate a surge in the housing industry, which is then liable to be suddenly choked off when an inflation component begins to be widely factored into higher interest rates. Thus, a long term policy of credit expansion tends to eventually throttle the housing boom to which it originally gave birth.

More research is needed, but a CRB Index futures contract could conceivably be used by managers in the building and forest products industries to hedge the spreads between the overall commodity price level and such products as metals and lumber. Similarly, building contractors and city managers may possibly use a CRB Index futures contract to transfer some of the risks of future residential project costs.

8. Commodity Prices and Business Formation

The U.S. Department of Commerce Index of Net Business Formation roughly measures the net difference between newly chartered businesses and reported business failures. The long term correlation of business formation and the CRB Index are given below.

	1/31/70–12/31/83
Correlation (on actual levels) between the CRB Index and the Index of Net Business Formation (1967=100)	0.507

The relationship between commodity prices and business formation is tenuous and complicated. For example, a given business may be brought into being because of an attractive, suddenly higher price for a product or commodity that justifies its production. On the other hand, businesses may be forced to lower

TABLE 2.
Cycle II (Nov. '73–Jan. '80)

		Bust			Boom		
Indicator	Type	Peak (11/73)	Trough (3/75)	%	Trough (3/75)	Peak (1/80)	%
M1 Money Supply (in billions of 1972 $)	Leading	240.3	222.0	−8	222.0	109.7	−6
Index of New Pvt. Housing Units Authorized by Local Building Permits (1967=100)	Leading	120.8	61.1	−49	61.1	103.4	+69
Index of Net Business Formation (1967=100)	Leading	114.1	100.2	−12	100.2	128.1	+29
Index of Industrial Production, Business Equipment (1967=100)	Leading	137.8	125.7	−9	125.7	175.2	+39
Index of Industrial Production, Non-durable Manufactures (1967=100)	Leading	135.1	116.1	−19	116.1	166.0	+43
Index of Industrial Production, Durable Manufactures (1967=100)	Coincident	129.8	104.7	−19	104.7	144.8	+38
Index of Help-Wanted Advertising in Newspapers (1967=100)	Unclassified	126	74	−41	74	154	+108
Index of Labor Cost per Unit of Output, Total Manufacturing (1967=100)	Lagging	119.9	147.7	+23	147.7	183.7	+24
CRB (BLS-formula) Index of Spot Prices, 23 Commodities (1967=100) (end of month)		192.1	200.8	+5	200.8	288.0	+43
CRB Futures Price Index (1967=100) (end of month)		191.3	192.2	+0.4	192.2	289.6	+51

or modify their production by price increases for those commodities that constitute their costs.

Perhaps the most important condition of business formation is interest rates. Fig. 14 indicates two notable coordinated swings in the CRB Index and the Index of Net Business Formation since the '70s: roughly between 1971–1973 when both indices made sharp gains; and latter part of 1979–1982 when both indices broke. The former period was a time of generally falling interest rates, while the second period saw steep increases in both long and short-term interest rates. A radical dip in net business formation in 1975 was accompanied by an intermediate peak in interest rates that the futures markets correctly interpreted as a pause before a second round of inflation.

9. Commodity Prices and Labor

The position of labor as a factor of production implies a relationship between wage rates and commodity prices not unlike that described between capital goods and commodity prices. Wage rates may be indirectly determined by judgments of the prices for various commodities. Up to a point, employers may be willing to pay higher wage rates as the prices of the commodities they produce likewise increase. More likely, commodity prices are a measure of inflation which is quickly translated into wage rates.

	1/31/70–12/31/83
Correlation (on actual levels between the CRB Index and the Index of Help-Wanted Advertising in Newspapers 1967	0.429
Correlation (on actual levels) between the CRB Index and the Index of Labor Cost per Unit of Output, total Manufacturing 1967=100	0.199

It is interesting to note that while the correlation between the CRB Index and the Index of Help-Wanted Ads (which measures the demand for labor), is not high statistically, it looks high on the graphic comparisons. In fact, the help-wanted index often leads the CRB Index. However, the correlation between commodity prices and labor costs per unit of manufacturing output seems virtually nil.

TABLE 3.
Cycle III (Jan. '80–July '81)

		Bust			Boom		
Indicator	Type	Peak (1/80)	Trough (7/80)	%	Trough (7/80)	Peak (7/81)	%
M1 Money Supply (in billions of 1972 $)	Leading	209.7	202.3	−4	202.3	197.6	−2
Index of New Pvt. Housing Units Authorized by Local Building Permits (1967=100)	Leading	103.4	101.7	−2	101.7	75.5	−26
Index of Net Business Formation (1967=100)	Leading	128.1	119.1	−7	119.1	118.2	−1
Index of Industrial Production, Business Equipment (1967=100)	Leading	175.2	169.5	−3	169.5	184.8	+9
Index of Industrial Production, Non-durable Manufactures (1967=100)	Leading	166.0	154.6	−7	154.6	167.1	+8
Index of Industrial Production, Durable Manufactures (1967=100)	Coincident	144.8	128.7	−11	128.7	143.6	+12
Index of Help-Wanted Advertising in Newspapers (1967=100)	Unclassified	154	118	−23	118	123	+4
Index of Labor Cost per Unit of Output, Total Manufacturing (1967=100)	Lagging	183.7	203.1	+11	203.1	208.9	+3
CRB (BLS-formula) Index of Spot Prices, 23 Commodities (1967=100) (end of month)		288.0	282.0	−2	282.0	276.9	−2
CRB Futures Price Index (1967=100) (end of month)		298.6	302.3	+4	302.3	279.3	−7

TABLE 4.
Cycle IV (July '81–Nov. '83*)

Indicator	Type	Bust			Boom		
		Peak (7/81)	Trough (11/82)	%	Trough (11/82)	Peak (11/83)*	%
M1 Money Supply (in billions of 1972 $)	Leading	197.6	201.9	+22	201.9	213.9	+6
Index of New Pvt. Housing Units Authorized by Local Building Permits (1967=100)	Leading	75.5	99.1	+31	99.1	132.6	+34
Index of Net Business Formation (1967=100)	Leading	118.2	112.9	−4	112.9	118.0	+5
Index of Industrial Production, Business Equipment (1967=100)	Leading	184.8	146.4	−21	146.4	163.2	+11
Index of Industrial Production, Non-durable Manufactures (1967=100)	Leading	167.1	155.3	−7	155.3	176.7	+14
Index of Industrial Production, Durable Manufactures (1967=100)	Coincident	143.6	119.3	−17	119.3	114.1	+21
Index of Help-Wanted Advertising in Newspapers (1967=100)	Unclassified	123	78	−37	78	114	+46
Index of Labor Cost per Unit of Output, Total Manufacturing (1967=100)	Lagging	208.9	230.4	+10	230.4	221.1	−4
CRB (BLS-formula) Index of Spot Prices, 23 Commodities (1967=100) (end of month)		276.9	226.6	−18	226.6	269.1	+19
CRB Futures Price Index (1967=100) (end of month)		279.3	235.7	−16	235.7	273.9	+16

* The last month since the 11/82 trough for which cycle data is currently available. Boom in progress.

Table 5 (page 53) shows that, labor costs were one of the least volatile of ten economic indicators during four business cycles. It is the existence of binding union wages contracts and of minimum wage legislation that tend to make wage rates throughout all sectors of the economy "sticky" and generally slow to respond to changes in other price relationships.

Labor costs in the industrial sector have continued in a steady uptrend since the '70s even as the CRB Index fluctuated erratically from 1971 to 1978, and as the CRB Index declined sharply between late 1980 and 1982. Labor costs were set back somewhat, together with commodities prices, in mid-1975. Fig. 15 shows that, as of mid-1975, the demand for labor rose with the commodities price level. Then, in 1979, with the prices of commodities still increasing, the demand for labor fell off abruptly. The cost of labor (not shown) continued upward. Labor costs began to peak only after a protracted decline in commodities prices between 1980 and 1982, the shakeout of a severe recession.

It is possible that a CRB Index futures market might provide a hedge mechanism against long range labor costs because of its correlation with the cost of living indices. Many businesses are faced with a possible squeeze between the price for their products and the wages they must pay as codified in Cost of Living Allowance (COLA) agreements whereby wages are indexed to the cost of living. The employer will have to raise his price to make up for his increased costs, but it takes time to increase his profit margins and he may be caught in a temporary profit squeeze. In this situation he could assume a long position in the CRB Index futures market and stand a chance of making up on his long position a fair amount of the money he lost through COLAs because of an increase in the inflation rate.[1] A hedge of this kind could buy the employer the time during which the prices of his own products could move up to recoup their lag with the overall inflation rate.

Summary

In securities trading, the concept of index futures trading has been realized by new markets in stock index futures that have granted to portfolio managers a needed hedge and risk-transfer vehicle. The advantages of this insurance cannot be expressed in numbers, but it is obvious that the investing public has benefitted from these new markets because of reduced risk, lowered cost of investment, and the broad dissemination of market information that futures markets inevitably make available.

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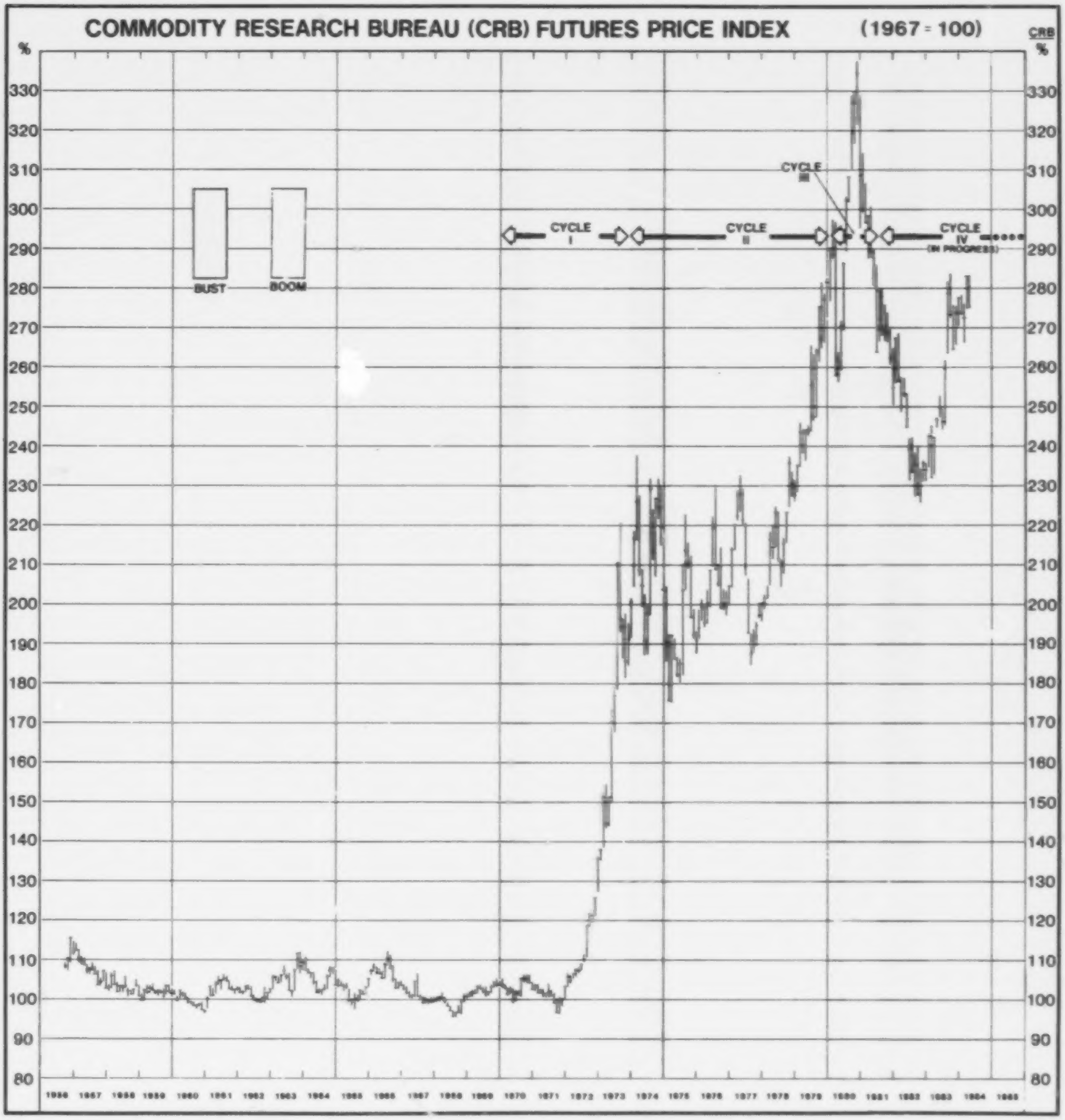
[1] We are indebted for this insight to Mr. William Johnson, President of Reef Points, Allentown, PA.

A CRB Index futures market is a logical evolution of index futures trading that would provide similar economic benefits to those whose business activities require substantial investments in commodity portfolios. This article has implied some of the other economic benefits that will result from the establishment of a CRB Index futures market. The benefits and the economic uses of a CRB Index futures market will be clarified by further extensive research, especially research on historical relationships between the commodity price level and the other prices, production, and economic indicators. Of course, the uses that will be made of a CRB Index futures market will ultimately be as creative and manifold as the market participants themselves.

fig: 16



1 M1 equals demand deposits plus currency held by the nonbank public (excluding holdings of foreign banks and official institutions.

2 Measures monthly changes in housing units authorized by local permit-issuing places. Basic data from 1972 to date based upon 14,000 permit-issuing places or nearly 81% of all new U.S. residential construction.

3 Based upon new business incorporations, reported business failures, and confidential data on telephones installed.

4 Index of business equipment including industrial (building, mining, and manufacturing) and commercial, transit, and farm equipment.

5 Those manufactured items with a life expectancy of less than 3 years: textiles, apparel, leather, paper and printing, chemicals, petroleum, rubber, foods, and tobacco.

6 Manufactured items with a life expectancy of 3 years or longer: primary and fabricated metals, machinery and allied goods, lumber, clay, glass, and furniture.

7 Reflects monthly changes in the number of jobs resulting from vacancies in already-existing jobs or from the creation of new jobs. Data based on classified sections of one newspaper in each of 51 cities, major labor market areas accounting for just over half of non-agricultural U.S. employment in 1971.

8 Measures volume of manufactured goods against employee compensation as a ratio. Manufacturing includes 11 major groups of durable goods and 10 major groups of non-durable goods; wages include monetary payments to employees (tips, salaries, commissions, bonuses, etc.), payments in kind to employees, and employee-contributed supplements to income such as social insurance.

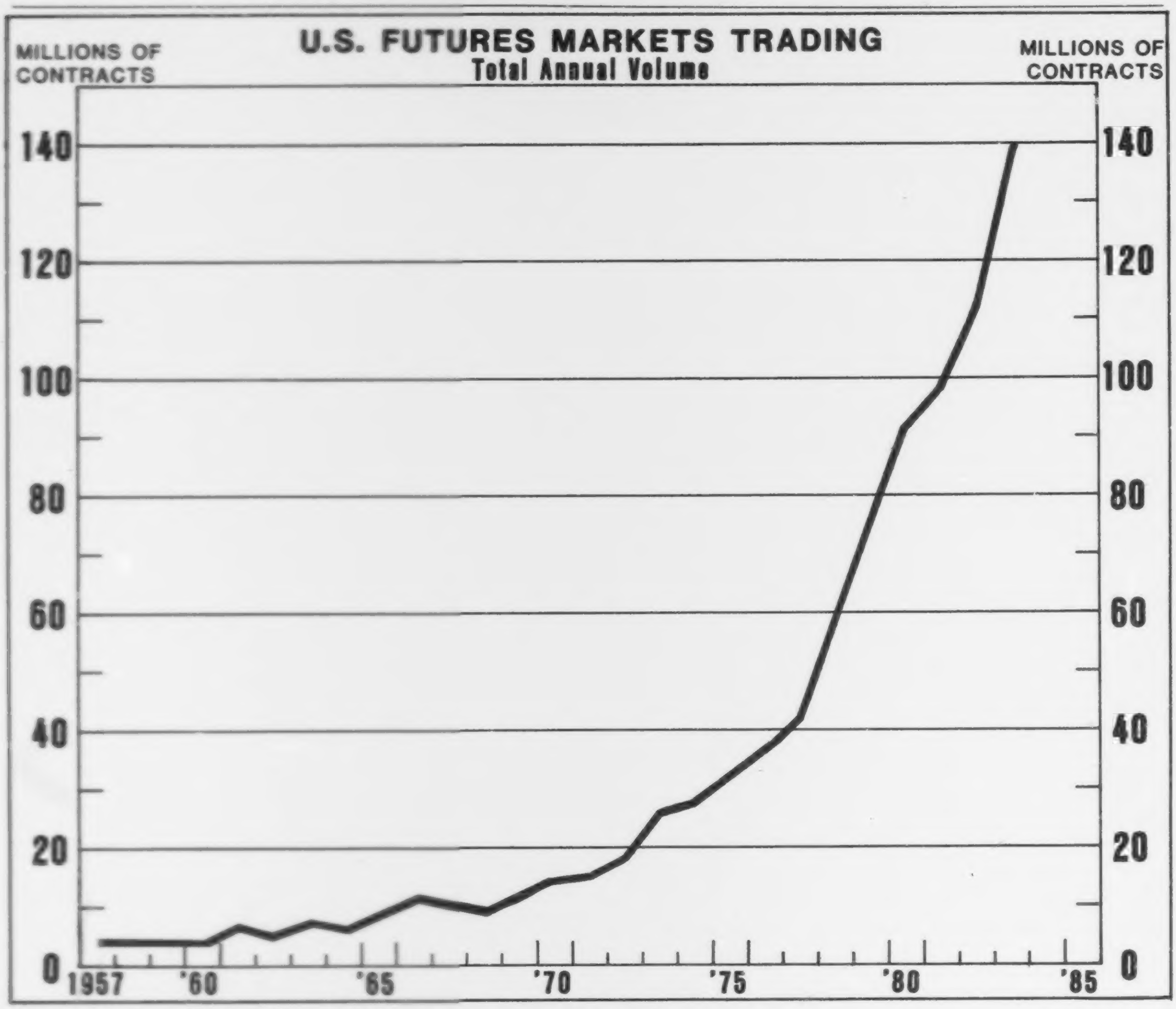
9 *Raw Industrials*—copper, scrap, No. 2, NY, $ per lb.; lead, scrap, heavy soft, $ per lb.; steel scrap, No. 1 hvy melt, Chicago, $ per ton; tin, Grade A, NY, $ per lb.; zinc, Prime Western, NY (delivered), $ per lb.; burlap, 10 oz. 40", NY, $ per yd.; cotton, 1-1/16" (9-market average), $ per lb.; print cloth, 48", 78 X 78, NY, $ per yd.; wool Tops, (nominal), Boston, $ per lb.; hides, cow, lt. native, Chicago, $ per lb.; rosin, window glass, NY, $ per 100 bs.; rubber, No. 1, ribbed smoked sheets, NY, $ per lb.; tallow, Prime, Chicago, $ per lb.
Foodstuffs—hogs, av. wg., Omaha, $ per 100 lbs.; steers, choice, Omaha, $ per 100 lbs.; butter, AA, 93, Chicago, $ per lb.; soybean Oil, crude, Decatur, $ per lb.; lard, Chicago, $ per lb.; cocoa beans, Ivory Coast, N.Y., $ per tonne; corn, No. 2 Yellow, Chicago, $ per bu.; sugar, raw, NY, $ per lb.; wheat, No. 1 Hard Winter, K.C., $ per bu.; wheat, No. 1 Spring, Mpls., $ per bu.

TABLE 5.

Average % Change in Selected Indicators (Up or Down) During Four Historical Business Cycles

Indicator	Type	Bust			Boom		
		Average % Change	+	–	Average % Change	+	–
M1 Money Supply (in billions of 1972 $)	Leading	8.58	1	3	4.75	2	2
Index of New Pvt. Housing Units Authorized by Local Building Permits (1967=100)	Leading	28	2	2	34.25	2	2
Index of Net Business Formation (1967=100)	Leading	7.5	0	4	11.0	3	1
Index of Industrial Production, Business Equipment (1967=100)	Leading	10.5	0	4	23.5	4	0
Index of Industrial Production, Non-durable Manufactures (1967=100)	Leading	7.25	0	4	21.5	4	0
Index of Industrial Production, Durable Manufactures (1967=100)	Coincident	14.5	0	4	26.5	4	0
Index of Help-Wanted Advertising in Newspapers (1967=100)	Unclassified	32.75	0	4	53.5	4	0
Index of Labor Cost per Unit of Output, Total Manufacturing (1967=100)	Lagging	11.75	4	0	9.25	3	1
CRB (BLS-formula) Index of Spot Prices, 23 Commodities (1967=100) (end of month)		7.75	1	3	35.25	3	1
CRB Futures Price Index (1967=100) (end of month)		5.2	3	1	39.25	3	1

FUTURES TRADING ACTIVITY


U.S. FUTURES MARKETS TRADING
Total Annual Volume

Futures Volume Highlights 1983 in Comparison with 1982

1983 Rank		1983 Contracts	1982 Rank	1982 Contracts
(1)	T-Bonds (CBT)	19,550,535	(1)	16,739,695
(2)	Soybeans (CBT)	13,680,324	(3)	9,165,520
(3)	Corn (CBT)	11,924,576	(4)	7,948,257
(4)	Gold (Comex)	10,382,805	(2)	12,289,448
(5)	S&P 500/Index (CME)	8,101,697	(10)	2,935,532
(6)	Silver (Comex)	6,432,982	(11)	2,868,639
(7)	Live Cattle (CME)	4,248,152	(6)	4,440,992
(8)	Wheat (CBT)	3,886,914	(7)	4,031,584
(9)	Soybean Meal (CBT)	3,872,453	(13)	2,784,423
(10)	Soybean Oil (CBT)	3,858,558	(9)	3,049,313
(11)	T-Bills-90 Day (CME)	3,789,864	(5)	6,598,848
(12)	Swiss Franc (CME)	3,766,130	(14)	2,653,332
(13)	NYSE Composite Index (NYFE)	3,506,439		1,432,913
(14)	Japanese Yen (CME)	3,442,262	(19)	1,762,246
(15)	Sugar "11" (CS&C)	3,201,968	(17)	2,037,020
(16)	Copper (Comex)	3,186,914	(15)	2,362,625
(17)	Live Hogs (CME)	2,790,746	(8)	3,560,974

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Commodity Futures Contracts Traded 1979–1983

	Contract Unit	1983	1982	1981	1980	1979
Wheat	5,000 bu	3,886,914	4,031,584	4,511,934	5,428,160	3,575,395
Corn	5,000 bu	11,924,576	7,948,257	10,674,986	11,946,975	8,671,719
Oats	5,000 bu	359,825	424,595	370,103	320,934	215,928
Soybeans	5,000 bu	13,680,324	9,165,520	10,489,932	11,768,197	9,114,348
Soybean Oil	60,000 lb	3,858,558	3,049,313	3,047,490	3,167,895	3,081,646
Soybean Meal	100 tons	3,872,453	2,784,423	3,039,633	3,218,690	2,647,821
Iced Broilers	30,000 lb	—	—	—	4,079	25,681
Silver	5,000 oz	21,470	77,682	214,236	341,033	2,720,589
Silver	1,000 oz	2,643,166	755,136	184,776	—	—
Gold	100 oz	4,133	19,515	14,749	71,401	97,509
Plywood	76,032 sq. ft	50,424	100,001	144,318	169,550	146,570
Western Plywood	76,032 sq. ft.	—	—	30,871	—	—
GNMA Mrtges, CD	$100,000	—	—	175	12,619	77,365
GNMA Mrtges, CDR	$100,000	1,692,017	2,055,648	2,292,882	2,325,892	1,371,078
Com. Paper (90-day)	$1,000,000	—	—	49	15,996	39,702
T-Notes (4–6 year)	$100,000	—	—	2,721	450	11,599
T-Notes (6½–10 year)	$100,000	814,505	881,325	—	—	—
T-Bonds	$100,000	19,550,535	16,739,695	13,907,988	6,489,555	2,059,594
Domestic CD (90-day)	$1,000,000	0	145,360	158,920	—	—
Unleaded Reg. Gasoline	1,000 bbl	51,573	8,736	—	—	—
T-Notes (2 year)	$100,000	562	—	—	—	—
Crude Oil	1,000 bbl	94,591	—	—	—	—
Gold (kilo)	1 Kg	302,745	—	—	—	—
Heating Oil	1,000 bbl	3,152	—	—	—	—
Chicago Board of Trade		62,811,523	48,206,790	49,085,763	45,281,571	33,870,680
Fresh Eggs	22,500 dz	0	18	13	2,798	21,224
Potatoes	80,000 lb	—	9	973	2,481	1,126
Live Hogs	30,000 lb	2,790,746	3,560.974	2,258,083	2,153,767	1,805,710
Pork Bellies, Fzn.	38,000 lb	2,403,277	2,811,674	1,997,697	2,250,945	1,514,176
Live Cattle	40,000 lb	4,248,152	4,440,992	4,282,293	5,997,047	7,214,848
Feeder Cattle	42,000 lb	537,173	603,769	620,885	874,313	980,619
Broilers	30,000 lb	0	2,118	20,048	45,237	7,794
Lumber	130,000 bd. ft.	731,003	516,619	635,934	838,676	649,478
Stud Lumber	100,000 bd. ft.	—	—	156	2,198	5,059
Plywood	152,064 sq. ft.	0	35	386	—	—
British Pound	25,000	1,614,993	1,321,701	1,491,102	1,263,750	513,682
Canadian Dollar	100,000	558,741	1,078,467	475,585	601,925	399,885
Deutsche Mark	125,000	2,423,508	1,792,901	1,654,891	922,608	450,856
Japanese Yen	12,500,000	3,442,262	1,762,246	960,598	575,073	329,645
Mexican Peso	1,000,000	40,308	65,036	18,965	19,301	29,982
Swiss Franc	125,000	3,766,130	2,653,332	1,518,767	827,884	493,944
French Franc	250,000	26,348	16,474	2,080	144	406
Gold	100 oz	994,132	1,533,466	2,518,435	2,543,419	3,558,960
T-Bills (90-day)	$1,000,000	3,789,864	6,598,848	5,631,290	3,338,773	1,930,482
Domestic CD (90-day)	$1,000,000	1,079,580	1,556,327	423,718	—	—
Eurodollar	$1,000,000	891,066	323,619	15,171	—	—
S&P 500 Index	$500 x Index	8,101,697	2,935,532	—	—	—
S&P 100 Index	$200 x Index	390,902	—	—	—	—
Chicago Merc. Exchange		37,830,044	33,574,286	24,527,020	22,261,295	19,930,798
Wheat	5,000 bu	942,971	964,815	1,181,884	1,297,757	1,037,018
Grain Sorghum	5,000 bu	—	—	—	290	—
Value Line Index	$500 x Index	724,979	528,743	—	—	—
Mini Value Line	$100 x Index	25,092	—	—	—	—
Kansas City Bd. of Tr.		1,693,042	1,493,558	1,181,884	1,298,047	1,037,018
Wheat	5,000 bu	379,603	346,226	357,779	333,610	328,799
Sunflower Seeds	100,000 lb	4	38	14,845	27,368	—
Minneapolis Grain Exch.		379,607	346,264	372,624	360,978	328,799
Wheat	1,000 bu	334,413	243,640	279,082	550,950	379,975
Corn	1,000 bu	629,678	274,324	513,953	440,615	323,808
Oats	5,000 bu	11,797	12,981	4,176	2,364	1,961

Commodity Futures Contracts Traded 1979–1983

	Contract Unit	1983	1982	1981	1980	1979
Soybeans	1,000 bu	1,171,294	527,411	849,169	1,052,707	964,596
Silver	1,000 oz	96,611	125,409	143,051	209,494	361,576
Gold	33.2 oz	349,044	383,499	469,460	447,494	200,359
Live Cattle	20,000 lb	88,349	107,329	119,566	186,831	208,997
Live Hogs	15,000 lb	108,069	175,624	100,139	103,181	127,674
T-Bonds	$50,000	267,259	419,277	109,944	—	—
T-Bills	$500,000	37,755	100,417	—	—	—
Refined Sugar	40,000 lb	3,306	24,000	—	—	—
New York Silver	1,000 oz	30,833	3,810	—	—	—
British Pound	12,500	884	—	—	—	—
Swiss Franc	62,500	19,632	—	—	—	—
Deutsche Mark	62,500	6,607	—	—	—	—
Japanese Yen	6,250,000	10,835	—	—	—	—
Canadian Dollar	$50,000	171	—	—	—	—
MidAmerica Com. Exch.		3,166,537	2,397,721	2,588,540	2,993,636	2,568,950
Coffee "C"	37,500 lb	427,441	556,435	515,302	906,944	449,799
Sugar #11	112,000 lb	3,201,968	2,037,020	2,470,327	3,576,662	1,792,723
Sugar #12	112,000 lb	84,120	51,093	14,333	13,839	35,474
Cocoa	30,000 lb	—	—	—	187,309	231,918
Cocoa	10 M tons	1,162,540	607,964	562,651	201,662	265
Coffee, Sugar & Cocoa Exch.		4,876,069	3,252,512	3,562,613	4,886,416	2,510,179
Copper	25,000 lb	3,186,914	2,362,625	1,647,380	1,848,080	2,301,033
Silver	5,000 oz	6,432,982	2,868,639	1,240,720	1,058,734	4,080,619
Gold	100 oz	10,382,805	12,289,448	10,373,706	8,001,410	6,541,893
T-Bills (90-day)	$1,000,000	—	0	1,052	76,081	27,860
T-Notes (2-year)	$100,000	—	0	30,188	17,653	—
Aluminum	40,000 lb	11,896	—	—	—	—
Commodity Exchange, Inc. (N.Y.)		20,014,597	17,520,712	13,293,049	11,009,389	12,952,353
Cotton #2	50,000 lb	1,550,117	1,255,792	1,415,213	2,490,405	1,689,051
Orange Jce., Fzn. Con.	15,000 lb	124,267	207,070	387,182	162,864	186,018
Propane	100,000 gal	28,721	16,919	496	25	57
NY Cotton, Citrus & Pet. Exch.		1,703,105	1,479,781	1,802,891	2,653,294	1,875,126
T-Bills (90-day)	$1,000,000	—	—	9,766	32,452	—
T-Bonds	$100,000	18	4,464	162,942	139,410	—
Domestic CD (90-day)	$1,000,000	—	132	117,807	—	—
NYSE Composite Index	$500 x Index	3,506,439	1,432,913	—	—	—
NYSE Financial Index	$1,000 x Index	3,828	13,933	—	—	—
NY Futures Exchange		3,510,285	1,451,442	290,585	183,993	—
Palladium	100 oz	241,224	63,829	40,822	62,217	46,994
Platinum	50 oz	1,053,282	669,024	490,493	429,708	536,124
U.S. Silver Coins	$10,000	—	—	41	6,808	5,462
Imported Lean Beef	36,000 lb	—	7	7,976	24,119	16,704
Potatoes	50,000 lb	17,115	67,322	237,411	393,759	183,868
No. 2 Heating Oil, NY	1,000 bbl	1,868,322	1,745,526	995,506	238,284	33,804
No. 2 Heating Oil, Gulf	1,000 bbl	—	74	1,856	—	—
Leaded Reg. Gasoline, NY	1,000 bbl	406,843	104,082	7,300	—	—
Leaded Reg. Gasoline, Gulf	1,000 bbl	—	77	2	—	—
Crude Oil	1,000 bbl	323,153	—	—	—	—
Potatoes*	100,000 lb	16,650	—	—	—	—
NY Mercantile Exchange		3,926,589	2,649,941	1,781,407	1,154,905	828,249
Rice, Milled	120,000 lb	275	5,262	10,249	—	—
Rice, Rough	200,000 lb	11,964	11,253	11,478	—	—
Cotton	50,000 lb	1,004	8,388	9,271	—	—
Soybeans	5,000 bu	197	1,998	4,997	—	—
New Orleans Com. Exch.		13,542	27,872	35,995	—	—
Total All Contracts		139,924,940	112,400,879	98,522,371	92,096,109	75,966,471
CHANGE FROM PREVIOUS YEAR		+24.5%	+14%	+7%	+21.2%	+29.9%

* Cash Settlement. *Source: Futures Industry Association, Inc.*

Alcohol

Salient Statistics of Alcohol in the United States In Millions of Gallons[3]

Fiscal Year Ending Sept[6]	Ethyl Alcohol								Denatured Alcohol[2]				Prod. of Refined Methanol[4] (Synthetic & Natural)
		Withdrawals						Stocks at End of Fiscal Year	Completely	Specially			
			Tax-Free										
	Production[5]	Tax-Paid[5] 190° & Over	For Denaturation	For Use of U.S.	Other[1]	Total	Total Withdrawn		Production	Production	Withdrawals	Stocks Aug. 30[6]	
1971–2	569.0	68.0	435.4	.8	45.4	481.5	549.5	100.0	2.1	234.5	234.1	2.8	745.5
1972–3	679.7	67.8	460.9	.9	115.9	577.6	645.4	89.6	2.3	246.7	247.2	2.8	974.6
1973–4	647.4	72.4	469.7	.6	88.1	563.3	635.7	82.2	2.2	256.7	257.2	2.3	1,064
1974–5	581.0	72.7	403.3	.3	36.4	440.0	512.7	116.7	1.3	219.3	220.1	2.0	1,036
1975–6	503.4	78.5	419.3	.5	13.7	433.5	512.0	93.1	1.1	221.1	220.5	2.7	779.6
1976–7[6]	494.9	78.7	416.2	.4	14.6	431.2	509.9	79.0	1.1	223.8	224.1	2.7	940.1
1977–8	521.3	85.2	393.7	.4	15.1	409.2	494.4	76.2	1.1	221.9	222.3	2.6	971.8
1978–9	506.7[4]		455.7	.4	17.4	473.6		61.5	1.1	227.7[4]	222.3	2.6	970.4
1979–0	570.3[4]							76.2	18.0	260.7[4]	260.9	2.0	971.8
1980–1	643.2[4]							75.4		301.2[4]	281.5[4]	3.5	1,077
1981–2	571.2[4]							49.1		230.7[4]	227.1[4]	4.0	1,292
1982–3	601.0[4]							49.3		283.5[4]	276.5[4]	6.3	1,138
1983–4	635[4]									362.4[4]	290.4[4]		1,020

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[1] Represents withdrawals for hospital, scientific and educational use, for exports, etc. [2] At denaturing plants. [3] Ethyl alcohol in proof gallons; denatured alcohol in wine gallons. [4] On a CALENDAR YEAR basis. [5] Represents alcohol and spirits of 190° of proof and over. [6] THE FISCAL YEAR PRIOR TO 1976–7 was from JULY–JUNE. *Source: Alcohol and Tobacco Division*

T.1

U.S. Production of Ethyl Alcohol[1] & Spirits In Millions of Tax Gallons[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	45.0	41.5	41.7	44.4	43.4	48.6	43.7	43.6	46.9	56.4	51.6	46.9	552.9
1972	38.0	43.8	46.1	43.7	52.4	56.7	64.7	57.7	64.0	59.3	51.5	53.4	621.3
1973	57.1	52.5	57.1	58.4	58.1	55.9	54.2	57.4	59.9	62.7	62.2	56.4	692.1
1974	49.9	49.9	45.3	55.5	52.8	40.8	45.3	52.4	59.5	61.0	48.6	54.8	618.2
1975	52.0	40.4	44.5	41.4	39.8	39.1	41.3	40.1	39.6	53.8	46.4	48.0	526.4
1976	41.6	36.2	44.0	39.3	36.0	37.0	45.5	46.0	43.3	39.3	42.8	47.7	498.8
1977	36.5	37.7	42.8	39.2	43.5	43.2	40.3	40.9	41.0	44.7	48.9	39.7	498.3
1978	35.8	41.1	50.4	42.2	31.3	48.7	42.5	45.4	50.5	40.3	38.0	40.7	506.9
1979	42.8	41.3	49.3	47.3	42.9	48.2	43.8	46.0	53.7	49.4	51.0	54.6	570.3
1980	57.4	52.7	55.3	55.2	54.2	45.7	52.8	46.4	57.3	64.6	47.9	53.7	643.2
1981	49.2	44.3	49.3	51.0	44.0	42.2	45.1	55.8	53.1	44.0	47.8	45.4	571.2
1982	42.9	39.8	48.2	37.6	41.9	52.6	51.9	44.3	53.3	61.9	61.6	65.0	601.1
1983[3]	60.8	58.6	59.4	46.0	56.5	60.2	63.8	56.9	59.2	54.9			
1984													

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[1] At industrial alcohol plants. [2] A "tax gallon" is the alcoholic equivalent of a U.S. gallon at 60 degrees Fahrenheit, containing 50% of ethyl alcohol by volume. [3] Preliminary. *Source: Internal Revenue Service*

T.3

Average Wholesale Price Index of Ethyl Alcohol, in N.Y. Dec. 1973 = 100[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	55.0	55.0	55.0	56.1
1972	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
1973	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
1974[1]	113.1	115.4	123.6	129.9	133.0	148.9	152.5	154.2	167.5	180.9	189.4	193.9	150.2
1975	201.6	206.3	219.2	219.2	217.8	218.0	216.8	214.6	215.8	217.1	218.2	216.6	215.1
1976	217.2	230.2	233.0	233.6	233.0	233.0	233.0	232.5	233.0	233.0	232.3	233.0	231.4
1977	231.6	233.0	232.3	232.3	232.3	233.0	238.8	244.9	243.6	243.1	242.5	243.9	237.6
1978	243.9	231.0	230.3	226.4	226.4	225.8	226.4	226.6	226.4	218.8	226.4	226.5	227.9
1979	234.8	239.2	239.2	243.6	248.1	249.4	260.1	265.4	277.6	284.3	291.5	292.2	260.5
1980	311.7	319.6	325.0	338.4	361.4	369.4	370.3	369.2	369.2	369.3	369.2	369.2	353.9
1981	369.2	369.2	370.3	370.3	368.5	368.5	387.3	387.3	387.3	396.8	392.0	383.3	379.2
1982	382.2	353.5	349.6	346.4	N.A.	338.7	341.1	345.2	336.6	335.5	335.9	N.A.	346.5
1983	336.4	335.2	334.4	333.3	333.2	333.2	337.2	337.1	337.0	337.0	340.4	340.4	336.2
1984													

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[1] Data prior to 1974 are for specially denatured No. 1, 190 proof, tank carlots, f.o.b eastern works; freight prepared in CENTS PER GALLON. *Source: Bureau of Labor Statistics* (0614-0341.04)

T.2

Aluminum *(See feature article on page 16)*

World production of aluminum in 1983 was about 2 percent above that of 1982, according to preliminary data of the U.S. Bureau of Mines. U.S. primary aluminum production started in 1983 at a lower rate than a year earlier, with about 41 percent of annual capacity shut down. Producers continued to close potlines during the first quarter of the year because of low demand and reduced prices. Later, in response to the upturn in the construction and automobile industries, and an increase in the world aluminum price from about 47 cents per pound in January to about 71½ cents per pound in June, idle potlines were restarted. The operating rate increased to 71 percent of the 5.5 million ton capacity by the end of July. As an additional incentive, Bonneville Power Administration (BPA) on April 1 offered Pacific Nothwest producers surplus electric power at 11.2 mills per kilowatt-hour until November 1983. The list rate was 24.5 mills. On November 1, 1983 BPA increased its power rate by 9 percent from 24.5 mills to 26.8 mills and the reduced rate of 11.2 cents for surplus power was withdrawn. By December 1983, the domestic operating rate was 79 percent of capacity. For the entire year of 1983, domestic primary production of aluminum increased by slightly more than 2 percent compared with 1982 production.

U.S. aluminum recovery from scrap generated from current operations (new scrap) accounted for about 51 percent of the total recovery from purchased scrap. Discarded aluminum products (old scrap) such as cans accounted for the remainder.

U.S. imports in 1983 of crude metals and alloys increased 20 percent; imports of plates, sheets and bars, etc. rose 34 percent; and scrap imports increased by about 31 percent from 1982 levels. Major sources of aluminum imports during the 1979–82 period were: Canada—63 percent; Ghana—14 percent; Venezuela—6 percent; Japan—5 percent; others—12 percent.

Total apparent consumption of aluminum in the U.S. during 1983 was estimated by the Bureau of Mines to have increased by 16 percent, to the highest level since 1979, as the building and transportation industries recovered and packaging industry demand continued high. Packaging accounted for an estimated 37 percent of domestic consumption in 1983; transportation—19 percent; building—17 percent; electrical—9 percent; consumer durables—8 percent; and other uses—10 percent. The Bureau of Mines estimates domestic apparent consumption at 5.7 million short tons in 1984, compared with estimated primary aluminum production of 4.5 million tons. From a 1981 base, a year of low apparent metal consumption, demand is expected to increase at an average rate of 6.7 percent through 1990. A low rate of planned expansions because of high operating costs and uncertain energy costs suggest a low domestic production growth rate and a greater reliance on imports and recovery of metal from old scrap.

U.S. exports of ingots, slabs, and crude aluminum in 1983 were 1 percent below the 1982 level; exports of plates, sheets, bars, etc., were off 8 percent; scrap ingot exports increased by 8 percent and other scrap exports increased by 42 percent in 1983.

Total aluminum metal inventories in the U.S. at the end of 1983 were estimated by the Bureau of Mines to have dropped 16 percent from the year-earlier level.

Aluminum is one of the four controlled materials in the U.S. Department of Commerce's Defense Materials System (DMS), designed to meet the needs of the Department of Defense, National Aeronautics and Space Administration, Department of Energy, and other agencies supporting the defense requirements of the United States. Under DMS, defense orders are given priority, or authorized controlled material orders (ACM), and must be honored by suppliers unless they exceed predetermined set-aside limits. The increased emphasis on national security in the 1980's increases the critical and strategic importance of aluminum because of U.S. dependency upon foreign sources for the bulk of its aluminum raw material requirements. In the event of an emergency, a large part of the domestic aluminum demand could be diverted from nonessential civilian uses to strategic uses.

In addition, the National Defense Stockpile, as of November 30, 1983, contained a small amount of primary aluminum metal (about 2,080 short tons compared with a goal of 700,000 tons), as well as an inventory of bauxite.

U.S. spot prices for aluminum in 1983 advanced from a low of around 47.2 cents per pound to about 79 cents in late fall before dipping slightly before the year end.

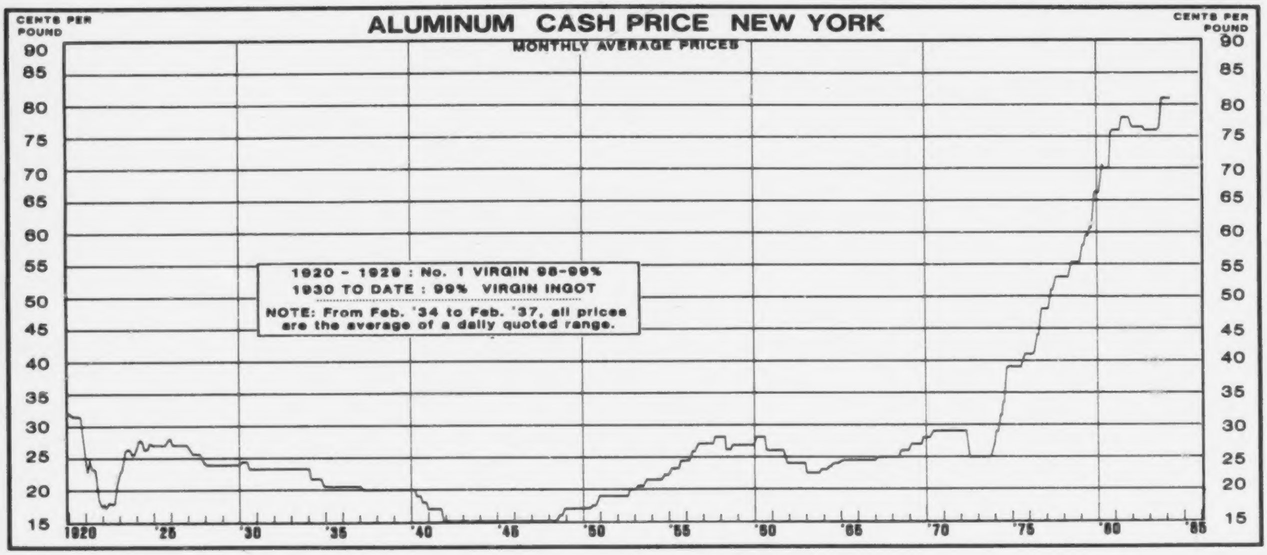
Futures Markets

Aluminum futures are traded on the London Metal Exchange (LME), and trading was initiated in aluminum futures on the Commodity Exchange, Inc. in New York on December 8, 1983.

World Production of Aluminum In Thousands of Short Tons

Year	Australia	Austria	Canada	China	France	W. Germany	Hungary	Italy	Japan	Norway	Spain	Switzerland	Cameroon	Un. Kingdom	United States	USSR	World Total
1976	256	98	698	350	424	768	78	228	1,013	681	232	86	64	369	4,251	1,760	13,913
1977	273	101	1,073	385	440	818	79	287	1,310	686	233	88	61	386	4,539	1,810	15,189
1978	290	101	1,156	400	431	816	79	298	1,166	704	234	88	54	382	4,804	1,840	15,578
1979	297	102	952	400	436	817	79	297	1,114	732	286	91	48	396	5,023	1,930	16,065
1980	335	104	1,184	400	476	806	81	299	1,203	720	426	95	48	413	5,130	1,940	16,955
1981[1]	418	104	1,230	400	480	804	82	298	849	698	437	91	41	374	4,948	1,980	16,614
1982[2]	399	104	1,174	410	430	794	82	298	387	702	402	91	41	265	3,609	2,070	14,626
1983[2]			1,220			790			410	700					3,640	2,100	14,900

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.4



Salient Statistics of Aluminum in the U.S. In Thousands of Short Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production Primary	Production Secondary	Primary Sold[1]	Recovery from Scrap Old	Recovery from Scrap New	Total Apparent Consumption	Net Shipments[5] by Producers: Wrought Products Plate Sheet Foil	Rolled Structural Shapes[2]	Extruded Shapes[3]	All	Castings Permanent Mold	Die	Sand	All	Total All Net Ship-Ments
1976	9	4,251	1,155	6,145	409	1,062	5,083	3,178	493	1,071	4,858	189	605	110	923	5,780
1977	7	4,539	1,271	6,566	531	1,074	5,492	3,423	467	1,198	5,210	220	652	113	1,004	6,214
1978	11	4,804	1,323	7,143	575	1,098	6,045	3,643	583	1,311	5,673	229	666	126	1,044	6,717
1979	4	5,023	1,401	7,051	614	1,163	5,888	3,592	618	1,263	5,615	241	635	143	1,040	6,655
1980	[7]	5,130	1,389	6,123	680	1,058	5,065	3,346	606	1,165	5,242	193	443	121	769	6,011
1981	[7]	4,948	1,537	6,224	836	1,137	5,087	3,414	523	1,103	5,164	172	476	123	791	5,955
1982[4]	7	3,609	1,616	5,792	862	974	4,818	3,033	436	993	4,554	116	406	108	653	5,207
1983[6]	18	3,696			846	1,017	5,570									

[1] Or used by producers. Includes shipments to the Gov't. [2] Also rod, bar & wire. [3] Also rod, bar, tube, blooms & tubing. [4] Preliminary. [5] Consists of total shipments less shipments to other mills for further fabrication. [6] Estimate. [7] Net exports. T.8

U.S. Supply and Distribution of Aluminum In Thousands of Short Tons

Year	Apparent Consumption	Production Primary	Production From Old Scrap	Imports	Exports	Inventories (Dec, 31) Private	Inventories (Dec, 31) Government
1976	5,083	4,251	409	749	484	2,850	2
1977	5,492	4,539	531	836	411	2,853	2
1978	6,045	4,804	575	1,080	520	2,747	2
1979	5,888	5,023	614	840	773	2,563	2
1980	5,065	5,130	680	713	1,483	2,538	2
1981	5,087	4,948	836	935	867	3,303	2
1982[1]	4,818	3,609	862	968	824	3,100	2
1983[2]	5,300	3,680	720	1,175	875	2,640	2

[1] Preliminary [2] Estimate *Source: U.S. Bureau of Mines*

U.S. Production of Primary Aluminum (Domestic & Foreign Ores) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1977	399	352	379	371	383	369	376	376	367	386	380	395	4,539
1978	400	367	395	387	405	395	408	410	399	416	404	418	4,804
1979[2]	418	379	419	402	423	410	428	430	419	435	423	435	5,023
1980[2]	431	406	434	421	438	425	427	426	419	437	427	439	5,130
1981[2]	445	404	448	431	441	420	426	416	393	396	364	364	4,948
1982[2]	351	311	336	319	321	300	297	287	271	275	266	275	3,609
1983[2]	279	246	273	270	292	288	313	327	330	353	350		

[1] Final annual totals. [2] Preliminary. *Source: Bureau of Mines* T.9

ALUMINUM

High, Low & Closing Prices of December Aluminum Futures in New York In Cents Per Pound

Year of	—Yr. Prior to Delivery—														
Delivery	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1984 High	—	—	86.15	81.75	79.10	76.85	71.95								
Low	—	—	80.15	77.75	73.65	71.80	66.45								
Close	—	—	81.45	78.85	73.95	72.60	66.55								

Source: Commodity Exchange, Inc. (Comex)—N.Y.

Month End Open Interest of Aluminum Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	Futures Trading Began Dec. 8, 1983											2,977
1984	3,304	3,006	3,262	2,278								

Source: Commodity Exchange, Inc. (Comex)—N.Y.

Volume of Trading of Aluminum Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1983	Futures Trading Began Dec. 8, 1983											11,896	11,896
1984	8,599	7,743	5,059	5,997									

Source: Commodity Exchange, Inc. (Comex)—N.Y.

Average Price of Aluminum (Virgin 99.5% Unalloyed Ingot) at N.Y. In Cents per Pound, Carload Lots

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	39.00	39.00	39.00	39.00	39.00	39.00	39.00	40.42	41.00	41.00	41.00	41.00	39.79
1976	41.00	41.00	41.00	41.48	42.50	44.00	44.00	46.91	48.00	48.00	48.00	48.00	44.49
1977	48.00	48.00	48.74	51.00	51.00	51.36	52.90	53.00	53.00	53.00	53.00	53.00	51.33
1978	53.00	53.00	53.00	53.00	54.23	55.25	55.25	55.25	55.25	55.25	55.25	55.50	54.44
1979	56.64	58.00	58.00	59.50	59.50	59.50	60.75	60.75	61.18	65.82	66.25	66.25	61.01
1980	66.25	66.86	68.40	70.52	70.00	70.00	70.00	70.00	70.00	75.65	76.00	76.00	70.81
1981	76.00	76.00	76.00	76.00	76.90	78.00	78.00	78.00	78.00	78.00	78.00	77.32	77.19
1982	76.50	76.50	76.50	76.50	76.50	76.50	76.50	76.50	76.50	76.00	76.00	76.00	76.38
1983	76.00	76.00	76.00	76.00	76.00	76.00	76.00	76.33	78.98	81.00	81.00	81.00	77.53
1984	81.00	81.00	81.00	81.00									

Sources: American Metal Market T.11

Average Price of Cast Aluminum Scrap (Crank Cases)[1] in New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	7.30	7.00	7.00	7.25	7.25	7.25	7.25	7.92	9.86	9.05	9.20	9.75	8.01
1976	9.75	10.17	11.90	14.09	14.10	14.00	15.50	16.45	16.74	15.02	14.50	13.60	13.81
1977	13.50	15.65	18.00	18.00	17.86	16.59	17.50	17.37	15.50	15.00	15.45	16.00	16.37
1978	16.71	18.50	19.11	22.10	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.75	21.39
1979	23.64	25.34	28.05	32.08	35.55	35.65	33.65	30.90	29.55	31.59	31.50	31.50	30.75
1980	34.36	37.90	43.85	37.47	30.52	27.00	28.18	30.52	31.00	31.00	30.08	27.50	32.45
1981	27.50	27.50	27.50	27.41	25.20	23.50	23.50	23.50	22.83	21.77	20.50	20.50	24.27
1982	20.50	20.50	19.85	19.50	19.25	16.32	16.00	16.00	16.00	16.00	14.95	14.50	17.45
1983	15.12	17.50	19.50	19.50	23.50	25.50	27.65	31.80	33.50	33.50	33.50	33.50	26.17
1984	34.83	35.50	36.59	37.50									

[1] Dealers' buying prices. *Source: American Metal Market* T.12

Aluminum Products (Ingot & Mill Products) Shipments[1] in the U.S. In Million Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	1,300	1,203	1,307	1,336	1,256	1,225	1,103	1,105	1,025	1,106	890.3	782.4	13,639
1975	769.9	735.5	675.8	736.6	747.9	832.4	825.4	866.6	899.9	921.4	824.6	968.4	9,804
1976	902.5	945.7	1,135	1,059	1,203	1,169	942.1	1,173	1,007	1,016	960.9	1,056	12,247
1977	847.2	946.8	1,417	1,161	1,142	1,189	942.8	1,046	1,023	1,019	972.5	1,102	12,831
1978	932.7	1,024	1,277	1,079	1,223	1,257	1,114	1,187	1,175	1,342	1,183	1,207	13,982
1979[2]	1,270	1,147	1,374	1,141	1,264	1,201	1,137	1,186	1,084	1,192	1,098	1,130	14,517
1980[2]	1,255	1,218	1,274	1,180	1,135	1,093	1,104	1,177	1,184	1,232	1,021	1,203	14,057
1981[2]	1,090	1,072	1,294	1,199	1,189	1,248	1,039	1,119	1,082	1,040	860	928	13,237
1982[2]	849	934	1,095	1,995	971	1,113	879	1,100	1,014	1,059	943	1,108	11,960
1983	908	928	1,154	1,046	1,198	1,159	1,061	1,224	1,202				

[1] Mill products & pig & ingot (net shipments). [2] Preliminary. *Source: Bureau of the Census* T.10

U.S. Aluminum Inventories, Total (Ingot, Mill Prod. & Scrap) In Million Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1971	4,387	4,467	4,493	4,475	4,441	4,271	4,463	4,669	4,743	4,771	4,878	4,990
1972	5,026	5,050	5,038	5,003	4,984	4,919	4,869	4,924	4,896	4,868	4,866	4,856
1973	4,861	4,840	4,764	4,697	4,623	4,559	4,609	4,576	4,545	4,504	4,422	4,375
1974	4,366	4,276	4,250	4,182	4,233	4,291	4,329	4,428	4,533	4,559	4,650	4,869
1975	5,156	5,535	5,589	5,866	5,940	6,092	6,086	6,070	6,013	6,014	5,962	6,007
1976	5,999	6,011	6,036	5,899	5,823	5,685	5,554	5,605	5,545	5,541	5,613	5,720
1977	5,701	5,854	5,893	5,666	5,597	5,553	5,470	5,620	5,662	5,628	5,707	5,742
1978	5,706	5,809	5,799	5,730	5,749	5,695	5,664	5,704	5,586	5,610	5,575	5,548
1979[1]	5,494	5,395	5,242	5,009	5,017	4,950	4,893	4,921	4,915	4,941	4,940	5,000
1980[1]	5,112	5,069	5,011	4,949	4,910	4,950	5,021	5,072	5,026	4,966	4,942	5,082
1981[1]	5,076	5,221	5,323	5,408	5,495	5,600	5,632	5,964	6,086	6,187	6,276	6,524
1982[1]	6,607	6,670	6,742	6,658	6,683	6,684	6,577	6,626	6,508	6,434	6,431	6,391
1983[1]	6,200	6,158	6,093	5,892	5,744	5,579	5,439	5,472	5,375	5,248	5,295	5,207

[1] Preliminary. *Source: Bureau of Mines* T.5

Aluminum Exports (Metal & Alloys, Crude) from the U.S. In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	12.4	11.5	10.6	12.4	11.1	10.3	14.1	16.4	29.8	31.2	47.0	22.8	229.6
1974	22.0	20.9	30.4	22.8	17.7	13.6	15.0	14.4	12.3	16.7	9.2	12.8	207.8
1975	4.8	4.9	3.6	4.5	13.4	8.6	4.8	20.9	13.7	25.2	36.8	44.9	185.8
1976	31.3	4.1	25.8	14.6	7.2	9.7	10.5	9.8	6.2	7.5	13.1	12.7	152.4
1977	9.8	10.6	8.7	12.5	4.4	6.7	7.9	9.3	9.0	2.9	8.9	7.2	97.8
1978	3.7	5.7	6.1	4.2	7.0	9.3	8.5	11.0	15.9	17.7	23.1	14.3	126.6
1979	32.4	15.4	14.8	19.4	12.0	7.7	8.3	12.2	8.4	19.2	17.2	33.6	200.6
1980	39.6	37.7	52.8	52.3	52.3	61.3	51.3	97.6	98.9	70.1	55.0	46.1	714.9
1981	59.4	23.2	32.9	48.6	29.3	23.5	29.3	16.8	9.2	24.1	23.1	24.6	344.2
1982	22.1	18.8	46.0	26.6	19.9	48.5	24.2	42.6	23.6	59.5	42.1	27.3	401.2
1983	56.1	13.4	15.4	51.2	9.0	16.4	40.9	36.6	45.8	30.2	56.0	26.6	397.6

Source: Bureau of the Census T.7

Aluminum General Imports (Metal & Alloys, Crude) into the U.S. In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	46.8	43.9	70.0	55.0	73.4	66.3	44.8	39.2	52.2	47.0	53.3	54.5	646.4
1973	58.2	38.8	50.9	43.1	44.7	50.7	34.6	36.0	33.0	46.0	35.1	36.5	507.6
1974	30.5	34.7	48.6	41.1	44.1	38.2	36.6	51.0	41.5	53.1	47.4	42.3	509.0
1975	41.9	37.4	30.7	31.5	25.5	34.9	26.7	43.5	56.4	37.8	45.3	46.3	434.1
1976	36.1	47.0	50.7	71.7	68.8	70.9	33.2	68.6	27.9	34.2	33.6	25.9	575.4
1977	15.8	48.5	68.6	59.3	59.8	74.1	67.5	75.9	42.2	49.6	54.5	57.5	670.2
1978	53.0	64.0	74.4	58.2	89.9	83.5	66.9	50.8	51.3	86.9	43.1	35.0	756.9
1979	69.6	41.0	53.9	44.3	57.8	36.0	62.6	30.8	31.9	39.4	40.8	62.6	570.6
1980	61.8	45.3	47.8	45.4	42.1	51.7	40.3	40.7	43.0	41.4	29.9	78.3	580.8
1981	55.8	55.7	75.6	50.2	67.8	55.9	63.9	67.0	60.5	55.2	41.5	49.3	710.7
1982	38.5	65.9	61.7	61.0	51.0	66.5	42.2	78.2	52.8	52.7	60.1	47.8	679.4
1983	53.1	47.0	36.6	73.7	93.3	91.4	79.5	72.4	62.4	64.1	70.1	44.4	1,238.7

Source: Bureau of the Census T.6

Antimony

World mine production of antimony in 1983 approximated 55,800 short tons, according to preliminary U.S. Bureau of Mines data, 6 percent below estimated 1982 production. Major producers were the centrally planned economies, which accounted for about 38 percent of total production; and Bolivia, which accounted for 22 percent. U.S. mine production of antimony was small at only 825 tons in 1983, but it increased 64 percent over production in 1982. Nearly all mine output in the U.S. is accounted for by two companies. U.S. smelter output in 1983 increased 18 percent in 1983, to 14,486 tons. Production by secondary plants was estimated to have been slightly lower than in 1982. Approximately 50 percent of the apparent consumption of antimony in the U.S. is derived from old scrap, primarily as antimonial lead. Most of the recovered antimonial lead was consumed by the battery industry.

The U.S. continues to rely heavily on imports of both antimony metal and concentrates inasmuch as domestic producers supply less than 10 percent of the primary metal. Total imports in 1983 were 12,885 tons, off 4 percent from the year-earlier figure. Oxide accounted for the largest share of imports and registered a modest gain in 1983, whereas metal imports declined by about one-third. Bolivia accounted for 43 percent of total U.S. imports of ore and concentrate, but supplied 29 percent less than a year earlier. Sharp increases in imports of ore and concentrate were reported from the Republic of South Africa, Thailand, and Mexico. Most of the sharp drop in imports of antimony metal was accounted for by China. Imports of oxide from The Republic of South Africa and Bolivia, the leading suppliers to the U.S., increased in 1983, while imports from China decreased.

Consumption of primary antimony in the U.S. increased slightly in 1983, according to preliminary Bureau of Mines data. Industrial use of metal declined slightly, while oxide use increased. The use of primary antimony in metal products decreased 20 percent in 1983, mainly because of a reduction in the use of antimonial lead in batteries. The use of antimony in nonmetal products dropped 35 percent in 1983, primarily because of lower demand from the plastics, and ceramic and glass sectors. Flame retardants accounted for about 59 percent of total antimony use, only marginally lower than in 1982. Changes in the types of alloys used in automotive batteries have resulted in the reduced use of antimony as a hardener in battery grids. Antimony has been replaced by alternate metals in some original equipment, but continues to be used in some replacement batteries. The decline in the use of the metal for batteries is expected to be offset by the increased use of oxide as a flame retardant. From a 1978 base, U.S. demand for antimony is forecast to increase at an average annual rate of 3.1 percent through 1990.

U.S. industry stocks of primary antimony at the end of 1983 amounted to 3,743 short tons, 37 percent less than a year earlier, primarily because of a sharp drop in oxide stocks. During the fourth quarter of 1983, the General Services Administration (GSA) sold 1,000 tons of antimony metal from the National Defense Stockpile. This was the entire amount allocated for sale during fiscal 1984 and marked the final sale of antimony in the 3-year disposal program authorized by the Omnibus Reconciliation Act of 1981. Total sales for calendar year 1983 amounted to 1,863 tons.

The New York dealer price for antimony metal was $0.93 to $0.98 per pound at the start of 1983, and had risen to $1.25 to $1.35 per pound by the end of 1983.

World Mine Production of Antimony (Content of Ore) In Short Tons

Year	Australia	Bolivia	Canada[2]	China[1]	Czechoslovakia	Italy	Morocco	Mexico[2]	Peru[5]	Turkey	South Africa	United States	USSR	Yugoslavia[4]	World Total[1]
1977	2,303	18,012	3,500	11,000	330	891	1,553	2,974	903	2,118	12,715	610	8,700	2,478	74,600
1978	1,674	14,702	3,310	11,000	560	1,026	2,437	2,708	821	1,378	10,024	798	8,900	2,950	68,241
1979	1,603	14,351	3,256	11,000	584	1,047	2,175	3,166	602	309	12,815	722	9,100	2,245	69,519
1980	1,315	17,047	2,600	11,000	639	786	606	2,399	379	863	14,413	343	9,300	2,315	69,672
1981[3]	993	16,866	1,560	11,000	551	767	1,257	1,984	753	924	10,748	646	9,500	1,604	63,356
1982[1]	937	15,408	—	11,000	550	770	2,200	1,984	770	880	9,397	503	9,900	1,540	59,304
1983[1]		12,000						2,000			9,000	850		1,500	55,800
1984															

[1] Estimate. [2] Includes antimony content of miscellaneous smelter products. [3] Preliminary. [4] Metal. [5] Recoverable. *Source: Bureau of Mines*

T.13

Average Price of American Antimony R.M.M.[2] Brand (N.Y. Equivalent[1]—in Bulk) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00
1979[2]	177.00	177.00	190.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	196.08
1980	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	200.00	200.92
1981	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00
1982	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00
1983	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00
1984	200.00	200.00	200.00	200.00									

[1] Of F.O.B. Laredo, Texas Base. [2] Domestic refined in alloy beginning Jan. 1979. *Source: American Metal Market*

T.14

Salient Statistics of Antimony in the United States In Short Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production				Imports[5]				Industry Stocks, Dec. 31[2]						Prod. of Antimonial Lead[2]
		(Gross Weight) Ores	Primary[2] Mine	Primary[2] Smelter	Secondary (Alloys)[2]	Ore Gross Weight	Ore Sb Content	Metal Gross Weight	Exports[3]	Ores & Concentrates	Metallic	Oxide	Sulfide	Residues & Slag	Total[6]	
1972		2,072	489	13,344	22,428	33,542	17,212	2,302	121	3,562	1,332	3,179	182		8,622	1,050
1973		2,468	545	17,206	24,062	33,869	16,679	692	515	5,585	1,540	2,074	31		10,078	1,167
1974		3,217	661	16,657	23,570	31,330	14,655	2,203	871	6,275	809	3,732	35		11,694	1,097
1975	49	4,505	886	12,189	17,964	20,736	8,320	2,112	340	8,364	1,380	3,886	32		14,957	567
1976	54	1,111	283	14,618	19,799	20,945	10,023	2,083	341	7,899	1,662	4,560	31		15,070	730
1977	41	3,496	610	12,827	30,601	8,042	3,438	1,722	742	1,869	1,359	4,576	24	516	8,591	900
1978	43	4,231	798	14,110	26,456	8,672	4,495	4,127	556	1,610	1,119	4,906	19	457	8,201	783
1979	53	3,294	722	15,062	24,155	15,745	7,732	3,022	485	1,757	1,184	3,398	17	730	7,144	299
1980	48	3,041	343	16,062	19,893	11,044	5,235	2,590	453	2,743	680	3,855	13	1,116	8,411	30
1981	48		646	17,844	19,856	10,813	5,168	2,631	324	2,529	916	4,707	25	864	9,158	555
1982[1]	51		503	12,282	16,596	5,607	2,769	1,899	830	532	556	4,711	24	150	5,973	N.A.
1983[4]	52		825	14,486			2,770	1,282	268	446	800	2,480	21	N.A.	3,747	
1984																

[1] Preliminary [2] Antimony content. [3] Antimony ore, metal & compounds. [4] Estimate. [5] Imports for consumption. [6] Including primary antimony residues & slag. *Source: Bureau of Mines*

T.15

Industrial Consumption of Primary Antimony in the United States In Short Tons (Antimony Content)

Year	Ammunition	Metal Products							Non-Metal Products								Grand Total
		Antimonial Lead	Sheet & Pipe	Bearing Metal & Bearings	Cable Covering	Solder	Type Metal	Total All Metal Products	Fireworks	Flame Retardant	Non-Metal Ceramics & Glass	Non-Metal Rubber Pdt's.	Non-Metal Pigments	Non-Metal Plastics	Non-Metal Total[3]	
1972	64	6,149	108	559	19		142	7,382	4	2,280	1,695	587	644	2,391	8,742	16,124
1973	122	8,027	97	527	12		134	9,291	5	2,906	1,917	693	644	2,920	11,322	20,613
1974	121	7,251	69	476	16		107	8,429	11	4,383	1,384	664	460	1,431	5,229	18,041
1975	239	4,568	60	402	23	133	75	5,647	10	3,799	989	458	321	1,091	3,541	12,987
1976	63	3,861	74	405	19	188	79	4,900	12	5,552	1,260	578	415	1,277	4,885	15,337
1977	138	2,936	56	265	16	220	83	3,847	9	5,765	1,547	473	400	1,503	4,211	13,823
1978	133	2,832	39	279	21	206	81	3,736	5	5,854	1,259	254	410	1,456	3,562	13,152
1979	253	1,300	36	235	16	199	37	2,213	6	6,083	1,127	182	399	1,580	3,457	11,753
1980	362	748	29	223	31	134	21	1,650	4	5,695	1,303	325	499	1,636	3,894	11,239
1981	409	1,257	36	206	24	105	19	2,145	4	6,401	782	232	341	1,551	3,046	11,592
1982[1]	294	793	26	143	25	124	11	1,493	6	4,833	1,358	221	330	1,050	3,088	9,414
1983[2]		618		231		55	7	1,198		4,7[illegible]7	947	138	133	762	2,106	9,589
1984																

[1] Preliminary. [2] Estimate. [3] Excludes flame-retardant. *Source: Bureau of Mines*

T.16

Antimony Imported[3] into the U.S. and Price Ranges

Year	Imported for Consumption										Antimony Ore Minimum	
	Antimony Ore Value Ths. $	Needle or Liquated Antimony Gross Weight Sh. Tons	Needle or Liquated Antimony Value $ Ths.	Antimony Metal Short Tons	Antimony Metal Value $Ths.	Antimony Oxide Short Tons	Antimony Oxide Value $ Ths.	Foreign Metal ¢[2] Lb.	Antim. Trioxide ¢[2] Lb.	Metal[4] ¢[2] Lb.	60% $ Short Ton	65% $ Short Ton
1972	9,437	78	75	2,302	2,092	5,032	5,766	53½–57	69–77		7.60–10	
1973	10,903	51	73	692	745	4,651	6,095	55–135	69–105½		7.60–18.65	
1974	20,866	86	271	2,203	7,550	6,269	15,580				17–32	
1975	14,535	74	255	2,112	5,677	9,908	12,588	130–200	165–216		25½–27½	
1976	16,911	41	129	2,083	4,986	11,611	17,029				165.26	
1977	6,832	259	580	1,722	4,536	9,641	15,150	100–155	164–180		178	
1978	6,174	60	163	4,127	7,897	10,667	18,803	105–135	164–180	114.5	175	
1979	11,860	50	255	3,022	7,011	13,679	17,921	125–160	150–180	140.7	196	
1980	11,646	34	216	2,590	7,277	12,224	15,771	145–165	150–180	150.8	200	
1981	9,095	106	249	2,631	6,569	12,170	19,922	120–152	140–180	135.5	200	
1982[1]	4,289	88	188	1,900	3,893	10,433	18,045	93–124	120–180	107.2	200	
1983[1]				1,282						91.3	200	

[1] Preliminary. [2] Duty paid delivery, N.Y. [3] Imports for consumption. [4] N.Y. Dealer Price, 99.5% to 99.6%, C.I.F. U.S. ports. *Source: Bureau of Mines*

T.17

Apples

World Production of Apples (Dessert & Cooking) In Thousands of Metric Tons

Year	Mexico	Argentina	Australia	Spain	Belg-Lux.	Canada	France	West Germany	Italy	Japan	Netherlands	Turkey	United Kingdom	United States[2]	Yugoslavia	World Total
1971		512	360		280	398	1,854	1,980	1,698	1,007	520	780	466	2,890	327	15,233
1972		233	456		265	393	1,719	1,239	1,873	959	400	850	350	2,668	309	13,849
1973		233	335	1,015	246	375	2,060	2,016	2,050	963	460	850	456	2,830	448	15,719
1974	213	786	368	1,038	209	406	1,610	1,281	1,886	850	385	950	340	2,964	370	14,895
1975	230	608	368	1,091	268	460	2,125	2,035	2,127	989	430	900	338	3,415	370	16,910
1976	329	576	275	1,008	241	409	1,598	1,487	2,143	879	380	1,000	388	2,936	483	15,501
1977	297	820	301	672	120	411	1,186	1,176	1,828	959	315	900	234	3,057	381	13,934
1978	313	810	258	1,015	273	452	1,768	1,783	1,874	844	510	1,000	342	3.446	381	16,589
1979	338	972	345	1,097	322	435	1,769	1,951	2,023	853	450	1,350	334	3,694	428	16,605
1980	282	908	345	859	330	553	1,802	1,880	1,966	960	450	1,100	321	4,005	483	17,179
1981	280	804	330	1,007	134	419	1,468	773	1,773	846	260		227	3,517	508	14,308
1982[1]	180	730	300	847	263	461	1,895	2,775	2,223	927	410		354	3,681	667	18,113
1983[3]	239	816	254	892	184	425	1,393	1,191	1,880	908	295		272	3,718	534	14,403
1984																

[1] Preliminary. [2] Commercial crop. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.18

Salient Statistics of Apples[1] in the United States

Year	Production		Western Avg. Auction Price N.Y. $ Per Box		Utilization of Quantities Sold						Avg. Farm Price ¢ Per Lb.	Farm Value Million $	Foreign Trade[4]			Per Capita Consumption[5] in Lbs.
						Processed[5]							Domestic Exports		Imports	
	Total	Having Value	Golden Delicious	Red Rome	Fresh	Canned	Dried	Frozen	Juice & Cider	Other[3]			Fresh	Dried[5]	Fresh & Dried[5]	
	Millions of Pounds												Metric Tons[6]			
1971	6,373	6,083	5.76	4.37	3,484	1,094	96	191	1,087	132	4.92	299.2	2.5	.1	1.8	16.1
1972	5,879	5,868	6.36	5.04	3,342	977	149	235	1,029	136	6.43	377.5	3.1	.3	2.3	17.3
1973	6,265	6,252	7.76	5.00	3,539	1,255	248	259	822	128	8.80	549.0	3.7	.3	1.9	14.6
1974	6,580	6,530	8.81	7.04	3,691	1,226	197	182	1,031	204	8.40	551.6	4.9	.2	1.6	16.0
1975	7,530	7,103	8.22	5.16	4,357	1,027	230	207	1,192	91	6.50	460.9	4.7	.2	2.6	17.7
1976	6,472	6,467	7.57	3.67	3,916	920	229	220	1,109	73	9.10	586.5	123.7	4.6	55.7	18.7
1977	6,740	6,710	8.76	7.28	3,860	1,076	226	161	1,267	121	10.60	708.6	142.4	8.2	63.6	17.0
1978	7,597	7,544	9.77	6.00	4,210	1,224	221	207	1,495	186	10.40	781.4	154.8	7.3	78.5	15.8
1979	8,143	8,118			4,305	1,337	256	137	1,955	130	10.90	883.4	237.3	5.5	71.2	17.0
1980	8,828	8,810			4,942	1,202	195	168	2,139	165	8.70	762.5	311.3	7.6	85.6	17.9
1981	7,754	7,706			4,454	1,002	190	173	1,792	95	11.10	853.0	269.8	8.4	79.8	19.3
1982[2]	8,115	8,096			4,547	1,246	224	191	1,773	116	10.00	809.6				16.1
1983[2]	8,198	8,178									10.50	856.1				
1984																

[1] Commercial crop. [2] Preliminary. [3] Mostly crushed for vinegar. [4] Year beginning Oct. [5] Fresh weight basis. [6] Prior to 1976 data is in millions of bushels. *Source: Statistical Reporting Service, U.S.D.A.* T.19

Wholesale Price of Apples (Delicious) in the United States In Dollars Per Box

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	N.A.	6.347	N.A.	6.793	6.614	6.873	N.A.	N.A.	N.A.	6.360	8.100	6.885	6.853
1972	6.045	6.393	5.956	6.164	5.903	5.748	N.A.	N.A.	N.A.	7.350	8.121	7.560	6.582
1973	7.300	6.490	7.773	8.687	8.333	10.387	N.A.	N.A.	N.A.	6.869	8.125	7.868	7.981
1974	7.110	7.370	6.066	6.650	8.500	N.A.	N.A.	N.A.	8.213	9.793	N.A.	8.320	7.753
1975	8.193	9.500	10.000	9.580	11.783	14.081	N.A.	N.A.	N.A.	7.261	7.272	7.440	9.457
1976	7.217	8.437	8.250	8.750	7.752	8.070	N.A.	N.A.	N.A.	9.610	9.008	9.785	8.542
1977	N.A.	10.900	10.030	9.794	9.725	9.935	N.A.	N.A.	N.A.	9.960	9.000	8.020	9.417
1978	11.183	11.280	11.305	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	21.612	14.000	13.876
1979	13.500	14.000	14.000	14.500	13.500	13.750	N.A.	N.A.	N.A.	12.750	14.500	15.250	13.972
1980	15.750	15.667	16.750	16.750	16.750	19.000	N.A.	N.A.	N.A.	12.500	12.000	12.000	15.240
1981	12.000	12.250	13.500	12.583	12.875	13.500	N.A.	N.A.	N.A.	16.000	15.125	15.500	13.704
1982	15.125	16.000	16.833	15.000	N.A.	N.A.	N.A.	N.A.	N.A.	13.500	13.000	14.000	14.780
1983	13.000	13.500	13.125	12.563	13.000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	14.500	13.281
1984	15.000												

Source: Bureau of Labor Statistics (0111-0215.01) T.20

Arsenic

World production of arsenic in 1983 was estimated by the U.S. Bureau of Mines to be about unchanged from a year earlier, with a reduction in estimated production by France offset by increased production in Namibia. The USSR remained the world's largest producer of arsenic in 1983, accounting for approximately 30 percent of estimated total world production.

U.S. production of arsenic trioxide (recovered as a byproduct of the smelting of high-arsenic copper concentrates and arsenic-bearing residues) is small. Most domestic needs are met by imports of arsenic trioxide, with the major suppliers over a period of time being Sweden, which accounted for 33 percent of imports in the 1979–82 period; Mexico—22 percent; France—15 percent; Canada—18 percent; others—12 percent. Imports of arsenic trioxide for consumption dropped 25 percent from the 1982 level, according to preliminary data of the U.S. Bureau of Mines. Data on domestic smelter production and on apparent consumption of arsenic trioxide have been withheld to avoid disclosing company proprietary data.

The two major end uses for arsenic are: industrial chemicals (wood preservatives and flotation reagents- estimated at 60 percent of total use, and agricultural chemicals (herbicides and desiccants)—30 percent; followed by glass and ceramics—5 percent; nonferrous alloys—3 percent; other uses—2 percent. Demand for arsenic trioxide dropped significantly in 1983 as indicated by the sharp reduction in imports. The largest decline was in agricultural chemicals. The most important agricultural market for arsenical herbicides and desiccants is in cotton growing. However, as a result of the USDA Payment-in-Kind (PIK) program and drought, cotton plantings were reduced by 27 percent from the previous year's level.

There is no recycling of arsenic trioxide, but some gallium arsenide electronic scrap was processed for the recovery of gallium. There is no U.S. government stockpile of arsenic, despite heavy dependence upon imports.

World Production of White Arsenic (Arsenic Trioxide) In Short Tons

Year	Portugal	Spain	Brazil	Canada	France	W. Germany	USSR	Japan	Mexico	Peru	Rep. of Korea	Sweden	Namibia[3]	World Total
1970	209	19	328	71	11,236	408	7,880	974	10,075	851	N.A.	18,078	4,478	54,607
1971	205	—	163	50	11,000	40	7,880	1,054	12,658	723	N.A.	17,600	4,080	55,453
1972	15	—	181	30	8,423	491	7,940	471	6,523	1,123	N.A.	17,857	2,612	45,666
1973	399	—	76	—	9,000	520	7,990	322	5,606	1,528	10	16,755	8,981	51,187
1974	290	—	20	—	9,000	401	8,050	213	10,477	2,175	18	16,190	7,319	54,153
1975	282	—	14	—	7,300	350	8,100	66	6,747	1,461	110	12,884	7,345	44,659
1976	306		0		8,023	400	8,200	66	6,062	879	1,028	7,411	5,646	38,021
1977	245		—		6,661	400	8,300	131	6,332	1,507	713	6,613	2,882	33,784
1978	279				6,500	400	8,400	100	6,884	1,457	604	6,700	2,647	33,971
1979	380				6,118	—	8,500	201	7,206	1,560	650	5,600	2,448	32,663
1980	220				5,800	400	8,500	313	7,641	2,728	N.A.	4,500	1,420	31,522
1981[1]	216	—	—	—	5,700	400	8,600	330	7,184	2,385	187	4,400	1,510	30,912
1982[2]	220	—	—	—	5,600	400	8,700	330	5,326	2,400	N.A.	4,400	2,089	29,465
1983[2]					5,500		8,700		5,500	2,400		4,400	2,200	29,500

[1] Preliminary. [2] Estimate. [3] Output of Tsumeb Corp. Ltd. only. *Source: Bureau of Mines*

T.21

Salient Statistics of White Arsenic in the U.S. In Short Tons

	Imports For Consumption					Price		Trioxide Domestic[4] 95% As$_2$O$_3$	Metal Domestic 99% As	Imports of Arsenic Trioxide from						
Year	Trioxide (As$_2$O$_3$)	Metallic Arsenic	Arsenic Acid	Sulfide	Arsenic Compounds	Powdered in Barrels ¢ lb.[3]	Value of Imports Thous. $	— ¢ lb. 12/31 —		Peru	Canada	France	Mexico	South Africa	Sweden	Bel-Lux.
1970	18,763					6¼–6¾	2,089			100		2,650	7,750	111	8,142	
1971	17,306					6¼–6¾	2,187			68		1,425	8,316	196	7,276	
1972	13,613	661				6¼–6¾	1,956			24		1,556	3,552	285	8,184	
1973	13,496	643			—	6¼–6¾	2,045			25		1,281	5,605	409	6,144	
1974	13,742	707			43	13	2,449			24	—	480	6,185	145	6,889	
1975	12,013	483			77	20–23	4,426	13.1	160	66	—	595	3,174	970	7,172	
1976	4,262	288			355	20–21	1,528	13.1	175	—	—	462	3,793	—	3	
1977	5,981	357	382	—	1,109	20–21	1,962	13.1	190	—	22	1,352	3,089	—	1,323	
1978	10,306	369	565	—	473	28–32	5,918	23¼	190	—	136	5,077	2,603	—	2,281	189
1979	12,325	405	176	39	1	32	7,728	24¼	190	477	277	3,242	3,125	—	5,014	184
1980	12,528	266	271	11	1	35	9,190	31¾	300	—	486	2,780	3,720		4,770	388
1981	18,958	323	1,666	—	5	45	17,741	40	275	55	6,152	826	3,931	19	5,403	1,379
1982[2]	16,092	150	771	20	400	45	17,884	40	245	—	3,695	2,196	2,509	—	4,620	1,136
1983[1]	12,125	187						33	210							

[1] Estimate. [2] Preliminary. [3] Refined, 99%, at N.Y. docks. [4] F.O.B. Tacoma, Wash. *Source: Bureau of Mines*

T.22

Barley

World production of barley in the October–September 1983/84 season was estimated by the USDA in March 1984 at 169.6 million metric tons, up close to 3 percent from 1982/83 output. Increased production in the Soviet Union, and Australia more than offset reduced barley crops in Canada and in the EEC.

Utilization of barley worldwide in 1983/84 was estimated at 175.9 million tonnes, up 8 percent from the level of the preceding season. Increased consumption of barley was encouraged by the sharp reduction in overall world supplies of coarse grains and the related high cost of corn and sorghum. In addition, Turkey, which is usually an exporter became an importer due to a short domestic barley crop. Some EEC countries, particularly West Germany, the United Kingdom, Belgium, and France, were significant importers of malting barley from Canada, Australia, and New Zealand to make up for a shortfall in malting barley in the EEC crop.

Total world exports of barley in the 1983/84 season were expected by the USDA to total around 14.3 million tonnes, up only 2 percent from 1982/83 exports. However, exports were limited by reduced crops in countries which usually are signficant exporters. Canadian barley shipments were strong, despite Canada's reduced crop and sharply lower exports to the USSR. The USDA in early 1984 forecast 1983/84 season U.S. barley exports at 2.17 million tonnes, more than double 1982/83 exports of 1.02 million tonnes.

World stocks of barley at the end of the 1983/84 season were estimated by the USDA at 13.3 million tonnes, 32 percent below stocks at the end of the preceding season—and the lowest ending stocks in several years.

About one-half of the barley produced in the U.S. consists of high protein feed varieties, with the other half made up of malting barley, which contains more carbohydrates. Malting barley demand and prices in the U.S. have been increasingly adversely affected by the popularity of "light" beers which require less malt per barrel than other beers. As much as 20 percent of the domestic beer market is said to be accounted for by light beers. Malting barley often commands a premium of as much as a dollar per bushel over feed varieties. Feed barley is considered a good substitute for corn when it sells for around 80 percent of the price of corn.

Even though the U.S. 1983/84 beginning supply of barley was 10 percent higher than a year earlier, a high rate of use in the first 7 months of the season brought January 1, 1984 stocks to only 378 million bushels, 10 percent less than a year earlier. About 97 million bushels of the January 1, 1984 U.S. stocks were in the farmer-owned-reserve (FOR) and 11 million in the CCC inventory, leaving about 270 million available to the market. Use for the January–May 1984 period was estimated to total around 246 million bushels, which would leave carryover stocks of about 137 million bushels, most of which was expected to be in the FOR and CCC inventories, versus total ending stocks a year earlier of 223 million bushels.

The U.S. average farm price hit a low of $2.20 per bushel in July 1983, and rose to a mid-January price of $2.64 per bushel. The high cost of corn and excellent exports were major factors contributing to strong barley prices.

U.S. Government Price Support

U.S. barley producers who participated in the 1983 acreage reduction program were paid deficiency payments at a rate of 21 cents per bushel. The deficiency payment is based on the difference between the established target price ($2.60 per bushel) and the higher of the national weighted average market price for June through October ($2.39 per bushel) or the loan rate ($2.16 per bushel). About 50 percent of the barley base acreage was in compliance with the 1983 feed grain program. Preliminary reports indicated that about 46 percent of the barley base acreage was enrolled in the 1984 feed grain acreage reduction program. The 1984-crop national average loan rate for barley is $2.08 per bushel and the target price remains at $2.60 per bushel.

Futures Market

Feed barley futures are traded on the Winnipeg Commodity Exchange.

World Barley Supply and Demand In Millions of Metric Tons

	Exports						Imports			Utilization				Stocks[2]		
Crop Year	Australia	Canada	EC-10	Total Non-U.S.	U.S.	Total Exports	U.S.S.R.	Total Imports	Production	West Europe	Non-U.S.	U.S.	Total Utilization	Non-U.S.	U.S.	Total Stocks
1979–80	2.9	3.0	3.2	10.0	1.2	11.3	2.3	11.3	160.2	51.4	157.6	8.2	165.8	13.8	4.2	18.0
1980–81	1.5	4.0	4.6	12.4	1.8	14.2	4.0	14.2	163.6	51.9	156.6	7.6	164.2	14.4	3.0	17.4
1981–82	2.1	5.5	3.5	13.2	2.0	15.2	3.6	15.2	156.6	48.0	148.6	8.2	156.8	13.9	3.3	17.2
1982–83	.5	6.0	4.3	13.0	1.0	14.0	2.2	14.0	165.2	49.9	153.9	9.0	162.9	14.7	4.9	19.5
1983–84[1]	2.6	5.5	2.5	12.3	2.0	14.3	1.0	14.3	169.6	48.4	164.7	11.2	175.9	10.3	3.0	13.3
1984–85																

[1] Preliminary. [2] End of Crop Year Season. *Source: Foreign Agricultural Service, U.S.D.A.*

World Production of Barley In Thousands of Metric Tons

Crop Years	China	United States	Argentina	Canada	Rep. of Korea	Denmark	Morocco	France	India	Japan	USSR	W. Germany	Spain	Turkey	United King.	World Total
1977–8	6,860	9,144	353	11,799	814	6,084	1,345	10,290	2,344	206	52,687	7,483	6,693	4,750	10,520	104,546
1978–9	7,000	9,776	554	10,387	1,348	6,301	2,326	11,321	2,311	326	62,077	8,608	8,608	4,750	9,850	182,600
1979–0	7,500	8,334	339	8,460	1,508	6,657	1,886	11,196	2,142	406	47,900	8,184	6,252	5,000	9,609	160,200
1980–1	7,600	7,859	217	11,259	859	6,044	2,210	11,758	1,624	375	43,400	8,826	8,705	5,300	10,326	163,175
1981–2	7,400	10,436	132	13,724	749	6,044	1,039	10,231	2,293	383	37,500	8,687	4,757	5,900	10,230	156,221
1982–3[1]	8,000	11,374	150	14,074	780	6,387	2,334	10,190	2,012	390	41,000	9,460	4,900	6,000	10,884	165,200
1983–4[2]	8,000	11,300		10,600							54,500					169,600

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.* T.23

U.S. Barley Acreage and Prices

Year Beginning June 1	Acreage (Million Acres): National Program	Acreage: Set-aside	Acreage: Planted	Acreage: Harvested for Grain	Yield per Harvested Acre in Bushels	Seasonal Prices: Received by Farmers[1]	Seasonal Prices: Minneapolis No. 3 or Better: Feed[2]	Seasonal Prices: Minneapolis No. 3 or Better: Malting[3]	Seasonal Prices: Portland No. 2 Western	Govt. Price Support Operations: National Avg. Loan Rate	Govt. Price Support Operations: Support or Target Price	Govt. Price Support Operations: Placed Under Loan (Mil. Bu.)	Govt. Price Support Operations: Total Payments to Participants (Mil. $)
						Dollars per Bushel							
1977–8	11.7	0	10.8	9.7	44.0	1.78	1.68	2.27	2.15	1.63	2.15	86.7	121[6]
1978–9	7.5	.8	10.0	9.2	49.2	1.92	1.80	2.38	2.10	1.63	2.25	67.6	97[9]
1979–0	7.8	.7	8.1	7.5	50.9	2.29	2.16	2.87	2.69	1.71	2.40	30.0	22[8]
1980–1	8.7	—	8.3	7.3	49.6	2.86	2.60	3.64	3.34	1.83	2.55	31.2	31[7]
1981–2	10.2	—	9.7	9.2	52.3	2.45	2.21	3.06	2.87	1.95	2.60	60.4	63[8]
1982–3[4]	—	.4	9.6	9.1	57.3	2.23	1.76	2.53	2.52	2.08	2.60	89.0	60[10]
1983–4[5]	—	1.0	10.6	9.9	52.4	2.50	2.38	2.79	2.85	2.16	2.60		67[11]
1984–5[5]			10.6[12]										

[1] Excludes support payments. [2] Beginning June 1977, No. 2 Feed. [3] 60% to 70% plump or better. [4] Preliminary. [5] Estimate. [6] Available for total feed grains only. [7] Disaster payments. [8] Deficiency & disaster payments. [9] Deficiency, disaster & diversion payments. [10] Deficiency payments. [11] Deficiency & diversion payments. [12] Prospective plantings. *Source: Commodity Economic Division, U.S.D.A.* T.24

High, Low & Closing Prices of May Barley Futures at Winnipeg In Canadian Dollars per Tonne

Year of Delivery		Year Prior to Delivery: June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Delivery Year: Jan.	Feb.	Mar.	Apr.	May	Life of Delivery Range
1980	High	108.10	107.90	107.70	112.00	117.30	117.60	121.40	123.10	116.90	116.40	116.00	130.10	130.00
	Low	89.00	89.70	93.70	103.70	107.00	111.40	112.30	112.50	111.20	110.70	109.40	110.40	89.00
	Close	104.30	92.40	107.70	111.50	115.00	114.90	121.10	116.50	111.80	111.10	110.60	124.50	—
1981	High	131.50	139.50	139.60	143.50	150.30	165.00	166.50	162.90	156.90	153.30	153.90	153.50	166.50
	Low	121.40	126.50	130.00	137.50	137.20	149.60	141.90	150.70	151.40	145.30	146.20	145.50	121.40
	Close	128.00	138.10	139.50	141.60	149.30	164.00	160.80	150.80	151.60	146.80	153.90	145.50	—
1982	High	144.00	144.20	141.90	133.10	134.70	133.00	130.80	133.20	132.90	128.20	125.50	133.00	144.2
	Low	133 60	136.20	128.50	127.50	129.00	127.00	126.60	128.80	126.80	118.00	121.30	121.80	118.0
	Close	134.60	142.30	131.00	129.50	132.90	127.50	129.10	131.50	127.00	125.30	122.00	125.80	—
1983	High	127.90	127.50	116.80	108.70	105.00	110.50	107.10	111.30	109.50	107.50	109.20	108.20	127.90
	Low	127.90	114.80	106.30	102.50	100.70	101.50	105.50	104.90	101.90	100.00	104.80	100.30	100.00
	Close	127.90	115.70	107.80	104.80	101.50	105.80	106.20	108.50	103.60	106.80	107.30	101.20	—
1984	High	109.00	110.50	131.00	142.10	141.00	138.00	137.00	137.00	133.00	132.00			
	Low	107.30	107.50	116.20	128.50	128.80	132.30	131.70	131.80	124.80	128.30			
	Close	107.50	110.50	128.60	137.20	134.00	133.90	136.20	132.60	128.90	132.00			

Source: Winnipeg Commodity Exchange T.26

Production of Barley in the United States, by States In Millions of Bushels

Year	Arizona	California	Colorado	Idaho	Kansas	Minnesota	Oklahoma	Montana	North Dakota	Oregon	Pennsylvania	Utah	South Dakota	Washington	U.S. Total
1978	2.5	45.6	14.3	63.2	2.3	52.0	2.7	55.9	112.7	10.8	4.5	9.8	20.9	23.2	454.8
1979	3.2	47.4	18.7	54.9	2.3	40.8	2.5	40.6	75.9	8.3	4.0	10.4	20.8	17.0	382.8
1980	4.5	44.1	15.9	59.0	2.1	34.6	1.7	44.1	48.0	10.1	3.8	10.8	15.2	32.3	361.0
1981	4.1	40.3	18.6	63.1	1.7	57.7	1.6	56.8	105.6	11.7	4.1	11.1	20.1	44.1	479.3
1982	6.6	38.4	17.0	74.5	2.3	51.0	1.3	76.4	108.1	14.1	3.7	13.2	23.4	49.4	522.4
1983[1]	4.1	29.4	19.1	65.7	4.5	41.3	1.5	77.7	124.2	16.4	3.9	11.1	23.1	54.4	519.0

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.25

BARLEY

Average Cash Price[2] of No. 2, Feed Barley, in Minneapolis In Cents Per Bushel

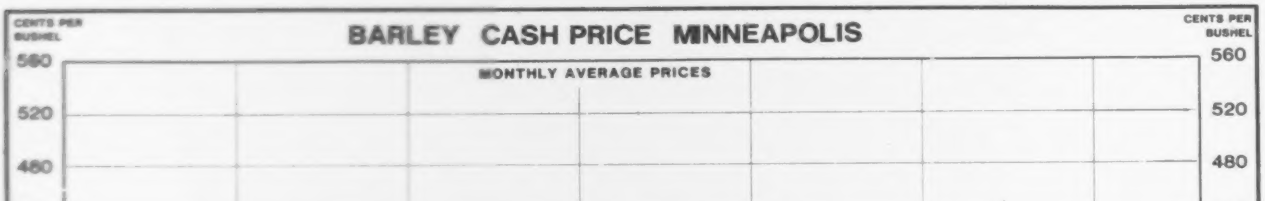
Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
1971-2	108	100	95	99	104	104	104	107	107	105	106	108	104
1972-3	105	96	98	111	110	114	127	134	120	119	125	136	117
1973-4	151	167	212	212	202	180	212	234	251	232	174	210	203
1974-5	236	236	269	248	307	317	289	282	259	226	224	205	258
1975-6	167	204	277	300	283	242	223	211	226	236	239	250	238
1976-7	262	245	248	268	246	221	205	220	235	229	228	213	235
1977-8	176[2]	163	150	158	166	165	165	165	165	166	191	190	168
1978-9	184	171	168	177	181	188	179	171	169	186	189	196	180
1979-0	216	239	215	222	234	211	215	209	204	206	212	209	216
1980-1	215	248	239	243	277	303	275	281	290	263	251	239	260
1981-2[1]	209	226	235	221	226	231	206	220	227	216	216	224	221
1982-3[1]	212	185	172	169	154	158	159	163	172	173	201	195	176
1983-4[1]	196	195	242	261	260	253	239	255	256	265	274		

[1] Preliminary. [2] Prior to June 1977 prices are for No. 3 or better. *Source: Economic Research Service, U.S.D.A.* T.27

Month End Open Interest of Barley Futures at Winnipeg In Contracts (20 Tonne)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	6,228	5,951	4,700	6,414	5,377	8,888	8,163	10,022	13,955	14,157	15,493	13,439
1979	16,704	18,864	18,579	23,142	17,635	23,336	26,643	25,193	24,230	20,466	22,107	21,468
1980	19,105	17,631	14,848	14,027	15,842	17,658	18,224	18,724	21,082	16,574	16,173	13,496
1981	14,560	13,335	13,836	16,380	14,252	12,968	15,101	16,620	16,086	10,971	10,591	8,832
1982	8,485	7,838	7,096	6,684	6,774	6,298	7,019	7,427	8,148	8,697	8,697	7,826
1983	9,952	10,972	9,535	10,458	11,064	12,592	12,688	18,486	19,110	17,099	15,083	10,673
1984	10,279	10,696	9,693	12,649								

Source: Winnipeg Commodity Exchange T.28



Salient Statistics of Barley in the United States In Millions of Bushels

Year & Periods Begin. June 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed & Residual	Total	Exports	Total Disappearance	Gov't. Owned[1]	Privately Owned[2]	Total Stocks
1975–6	92.2	379.2	15.7	487.1	5.0	124.8	15.7	189.3	334.8	23.9	358.7	—	128.4	128.4
1976–7	128.4	383.0	10.8	522.2	5.0	131.5	18.2	174.9	329.6	66.2	395.8	—	126.4	126.4
1977–8	126.4	427.8	9.4	563.6	6.0	133.1	16.7	177.5	333.3	57.2	390.5	—	173.1	173.1
1978–9	173.1	454.8	10.5	638.4	6.0	147.5	13.6	217.6	384.7	25.7	410.4	2.5	225.5	228.0
1979–0	228.0	382.8	11.8	622.6	7.0	151.0	14.0	203.7	375.7	54.8	430.5	3.2	188.9	192.1
1980–1	192.1	361.0	10.2	563.3	7.0	155.3	13.2	173.8	349.3	76.7	426.0	3.4	133.9	137.3
1981–2	137.3	479.3	9.6	626.2	6.9	150.9	16.3	202.3	376.4	100.1	476.5	3.3	146.4	149.7
June–Sept.	137.3	479.3	2.4	619.0	2.5	54.5	1.3	76.5	134.8	32.6	167.4	3.3	448.3	451.6
Oct.–Dec.	451.6	—	2.4	454.0	1.7	32.1	2.3	51.8	87.9	33.0	120.9	3.3	329.8	333.1
Jan.–Mar.	333.1	—	2.7	335.8	1.7	37.2	4.0	42.9	85.8	23.1	108.9	3.3	223.6	226.9
Apr.–May	226.9	—	2.1	229.0	1.0	27.1	8.7	31.1	67.6	11.4	79.3	3.3	146.4	149.7
1982–3[3]	149.7	522.4	10.7	682.8	7.2	145.9	17.4	242.7	412.8	47.2	460.0	6.0	216.8	222.8
June–Sept.	149.7	522.4	5.1	677.2	2.5	51.3	1.3	95.3	150.4	25.4	175.8	3.9	497.5	501.4
Oct.–Dec.	501.4	—	1.9	503.3	1.8	32.1	2.8	42.0	78.7	6.5	85.2	4.8	413.3	418.1
Jan.–Mar.	418.1	—	2.2	420.3	1.8	35.5	3.9	69.7	110.9	12.7	123.6	5.8	290.9	296.7
Apr.–May	296.7	—	1.5	298.2	1.1	26.6	9.4	35.7	72.8	2.6	75.4	6.0	216.8	222.8
1983–4[4]	222.8	519.0	10.0	751.8	—	175.0	—	339.8	514.8	100.0	614.8			137.0
June–Sept.	222.8	519.0	3.4	745.2	2.5	53.8	1.2	148.3	205.8	23.4	229.2	9.3	506.7	516.0
Oct.–Dec.	516.0		1.5	517.5	1.7	32.8	2.4	69.5	106.4	32.9	139.3	11.0	367.2	378.2
Jan.–Mar.														

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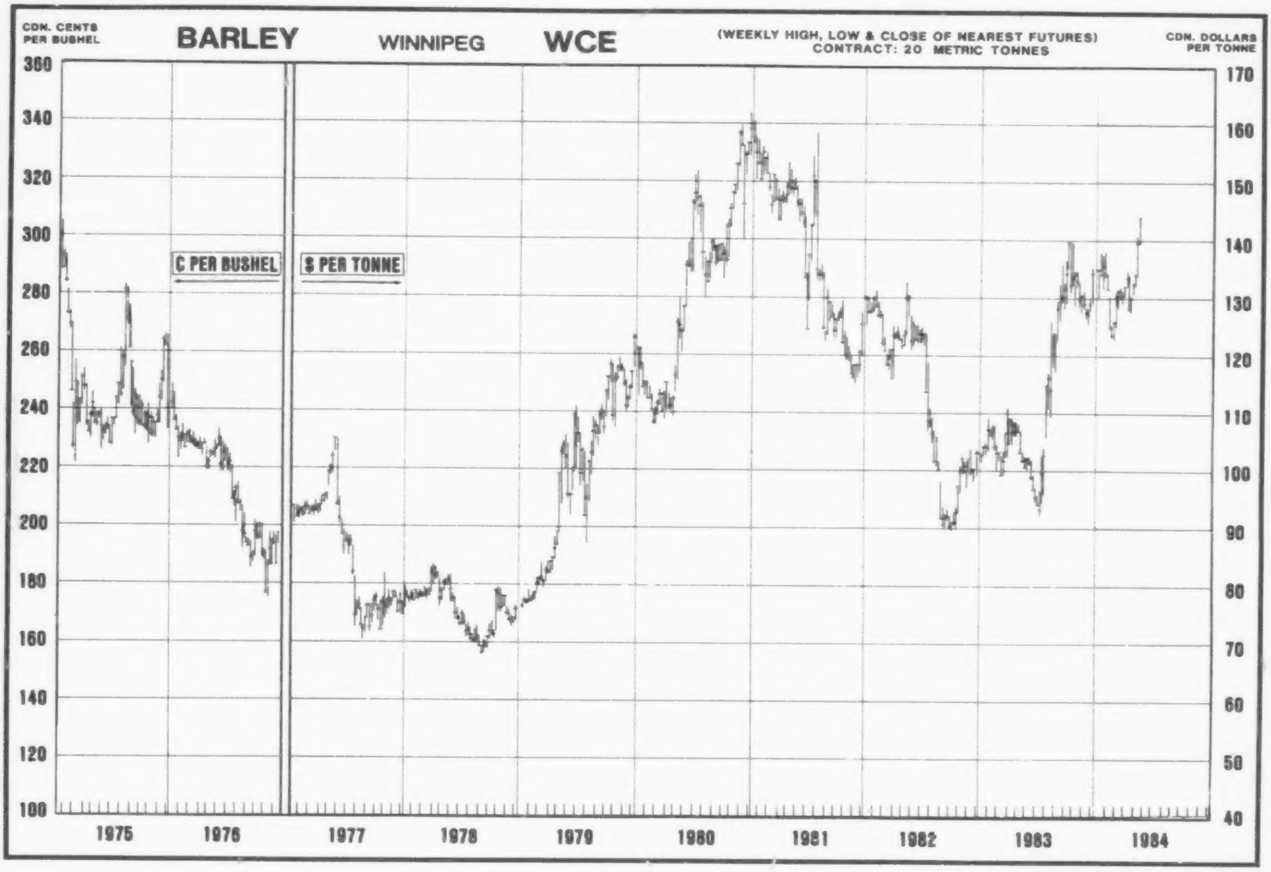
[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary. [4] Estimate. *Source: Commodity Economics Division, U.S.D.A.*

T.29



Bauxite

World mine production of bauxite in 1983 was about 5 percent below that of 1982, according to a preliminary estimate by the U.S. Bureau of Mines. World bauxite reserves are large, but domestic resources of bauxite are inadequate to meet long term U.S. demand. Bauxite is the only raw material used in the production of alumina on a commercial scale in the U.S. Alumina is an intermediate product in the aluminum production process. About 90 percent of the small domestic production and imported bauxite was processed into alumina and the remainder was used by the refractory, chemical, and abrasive industries. Approximately 90 percent of the alumina consumed in the U.S. is reduced to aluminum metal. Close to 4.5 tonnes of dried bauxite is needed to produce 2 million tonnes of alumina, which, in turn is processed into 1 tonne of aluminum.

The U.S. relies on imports for practically all of its supply of bauxite. U.S. production in 1983 was about 10 percent below the 732,000 metric tons produced in 1982. Average operating rates for U.S. bauxite mines and alumina plants were relatively low in most of 1983, reflecting very low aluminum industry demand.

U.S. imports of crude and dried bauxite for consumption dropped 25 percent in 1983, to 7.6 million metric tons from 10.1 million in 1982, primarily as a result of alumina plant shutdowns. The major import sources of bauxite were Guinea and Jamaica, which together accounted for 87 percent of total U.S. imports. Imports of alumina for consumption increased 27 percent, to 4.0 million metric tons from 3.2 million in 1982. Australia accounted for 74 percent of total U.S. imports of alumina for consumption in 1983.

The General Services Administration (GSA), in March 1983, contracted with the Government of Jamaica to purchase 1.0 million long dry tons of metal-grade bauxite for the U.S. National Defense Stockpile. Deliveries of bauxite to stockpile sites at Gramercy, La., and Gregory, Texas, were made during 1983. (Approximately one million tonnes of the 3.0 million tonnes of bauxite imported from Jamaica in 1983 was delivered to U.S. Government stockpiles.) A second contract was signed for the acquisition of 400,000 long dry tons of bauxite in a U.S. fiscal year 1983 exchange of surplus U.S. agricultural products. A similar barter agreement was expected to add an additional 600,000 long dry tons of ore to the National Defense Stockpile in fiscal year 1984.

World Production of Bauxite In Thousands of Metric[4] Tons

Year	Australia	Brazil	China	France	Greece	Guinea	Guyana[2]	Hungary	Indonesia	Jamaica[3]	Malaysia	Surinam	USSR[3]	U.S.[3]	Yugoslavia	World Total
1972	14,209			3,203	2,398	2,018	3,291	2,321	1,256	12,345	1,059	7,654	4,100	1,812	2,162	64,021
1973	17,535			3,084	2,600	3,000	3,224	2,559	1,200	13,385	1,200	6,580	4,200	1,879	2,133	68,563
1974	19,679	845		2,892	2,739	7,480	3,200	2,708	1,270	15,086	933	6,600	4,200	1,949	2,333	78,362
1975	20,672	945	970	2,523	2,958	8,273	3,200	2,844	977	11,388	692	4,850	4,300	1,772	2,270	73,610
1976[4]	24,084	827	1,300	2,330	2,551	10,848	2,686	2,918	940	10,296	660	4,613	4,500	1,989	2,033	77,417
1977	26,086	1,120	1,500	2,059	2,885	10,841	2,731	2,949	1,301	11,390	616	4,805	4,600	2,013	2,044	81,931
1978	24,293	1,160	1,500	1,978	2,663	11,527	2,425	2,899	1,008	11,739	615	5,188	4,600	1,669	2,565	80,975
1979	27,583	2,300	1,500	1,969	2,812	11,326	2,312	2,976	1,052	11,618	387	5,010	4,600	1,821	3,012	85,411
1980	27,178	5,538	1,500	1,921	3,286	11,862	1,844	2,950	1,249	12,054	920	4,646	4,600	1,559	3,138	89,119
1981[1]	25,541	5,770	1,500	1,827	3,216	11,112	1,681	2,914	1,203	11,682	701	4,100	4,600	1,510	3,249	85,474
1982[2]	23,621	4,186	1,500	1,671	2,853	10,908	953	2,627	704	8,380	589	3,059	4,600	732	3,668	74,441
1983[2]	23,000	3,900			3,100	9,000	800	2,800		7,400		2,700	4,600	700	3,600	71,000

[1] Preliminary. [2] Estimate. [3] Dry Bauxite equivalent of ore processed. [4] Data prior to 1976 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

T.30

U.S. Salient Statistics of Bauxite In Thousands of Metric[6] Tons

			Mine Production			Recovery[1] of Processed Bauxite			Dry Equivalent			Stocks, Dec. 31			
Year	Net Import Reliance as a % of Apparent Consumption	Av. Price F.O.B. Mine $ per Ton	Crude	Dried Equivalent	Value ($1,000)	Crude Ore Treated	Recovered[1] Total	Recovered[1] Dried Equiv.	Imports[2] (for Consumption)	Exports[2]	Consumption	Producers & Processors	Consumers	Govt.	Total
1972		5–15	2,200	1,812	23,238	399	210	319	12,601	29	15,375	791	2,797	16,453	20,041
1973		5–15	2,287	1,879	26,635	338	169	287	13,403	12	16,650	684	2,165	16,029	18,878
1974		5–15	2,370	1,949	25,663	348	177	279	14,976	16	16,904	534	3,982	15,152	19,669
1975[5]	91	5–15	2,199	1,801	25,083	361	182	287	11,714	20	12,587	494	5,293	15,308	21,094
1976	91	5–15	2,420	1,989	26,645	366	175	289	12,749	15	14,039	526	4,923	15,308	20,756
1977	91	5–15	2,436	2,013	27,555	419	169	294	12,989	26	14,528	685	7,264	15,087	23,036
1978	93	5–15	2,066	1,669	23,185	379	154	236	13,847	13	14,738	556	7,806	14,661	23,023
1979	93	5–15	2,186	1,821	24,875	466	235	336	13,780	15	15,697	620	7,958	14,661	23,239
1980	94	6–16	1,869	1,559	22,353	355	179	277	14,087	21	15,962	662	7,681	14,661	23,004
1981	94	8–20	1,847	1,510	26,489	419	187	328	12,802	20	13,525	897	7,395	14,661	22,953
1982[3]	96	8–20	896	732	12,334	234	120	178	10,122	49	9,217	583	7,010	16,326	23,919
1983[4]	96	8–20		662					7,601	60					

[1] Calcined, or sintered. [2] Including concentrates. [3] Preliminary. [4] Estimate. [5] Data prior to 1975 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

T.31

Beer

United States Production of Beer (Fermented Malt Liquors) In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	9.56	9.31	11.84	12.45	12.45	13.40	12.38	11.33	11.01	10.28	9.30	9.82	133.12
1971	9.62	9.41	12.53	12.33	12.37	13.72	13.28	12.28	11.41	10.53	9.87	10.02	137.36
1972	9.96	10.38	12.62	12.53	13.25	14.21	13.18	13.06	11.41	11.24	9.93	9.59	141.34
1973	10.98	10.73	13.14	12.86	13.83	13.09	13.76	14.17	12.12	12.38	10.90	10.65	148.60
1974	12.19	10.98	13.05	13.09	14.71	15.04	15.75	14.61	12.67	12.28	10.71	11.11	156.20
1975	12.55	11.18	12.41	14.50	14.34	15.76	16.08	14.72	13.35	12.35	11.22	12.15	160.60
1976	12.44	11.89	11.86	13.69	15.18	15.76	16.54	16.10	14.31	13.42	11.29	11.19	163.66
1977	11.98	11.48	16.20	16.03	16.79	16.90	15.92	15.31	13.26	12.61	12.02	12.01	170.51
1978	12.87	12.71	15.86	15.62	16.57	16.88	16.74	17.61	14.63	14.01	12.71	12.87	179.09
1979[2]	13.83	13.57	16.89	16.34	16.97	16.77	16.94	16.76	14.70	25.28	13.14	12.18	184.19
1980[2]	14.64	14.72	16.56	16.36	17.97	17.93	18.72	17.02	16.29	14.95	13.02	13.32	194.08
1981[2]	13.31	14.58	16.72	17.68	18.87	18.63	18.80	17.72	15.72	14.61	13.12	13.93	193.69
1982[2]	15.19	15.00	17.65	17.62	18.22	18.19	17.17	19.50	15.64	15.07	13.65	13.31	196.21
1983[2]	14.77	14.56	16.78	15.54	18.17	18.47	18.50	18.27	15.71	15.30	13.62		
1984													

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. [2] Preliminary. *Source: Internal Revenue Service*

T.32

Tax-Paid Withdrawals of Beer (Fermented Malt Liquors) in the U.S. In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	8.47	8.04	10.35	10.66	11.45	11.90	11.87	10.79	10.38	9.62	8.77	9.74	121.86
1971	8.19	8.52	11.00	11.04	11.05	12.88	12.50	11.89	10.96	9.80	9.74	9.83	127.40
1972	8.62	9.09	11.69	11.09	12.41	13.12	12.22	12.89	10.89	10.61	9.92	9.27	131.81
1973	9.67	9.43	12.01	11.65	12.87	12.55	12.77	13.68	11.52	11.54	10.73	10.08	138.47
1974	10.97	9.87	11.82	11.74	13.76	13.86	14.73	13.89	12.09	11.59	10.42	10.74	145.46
1975	11.12	9.84	11.57	13.01	13.42	14.44	14.75	13.88	12.51	11.90	10.61	11.59	148.64
1976	10.86	11.00	10.99	12.91	13.59	14.16	15.01	14.86	13.44	12.22	10.52	10.83	150.39
1977	10.01	10.43	14.55	14.28	15.00	15.71	14.80	14.64	12.89	11.62	11.49	11.51	156.92
1978	10.69	11.01	14.20	13.60	14.96	15.82	15.29	16.28	13.72	12.99	12.04	11.57	162.15
1979	12.32	12.01	15.01	14.96	15.00	15.57	15.13	15.56	13.71	13.64	12.52	11.08	168.12
1980	12.54	12.49	14.08	14.33	16.19	15.81	17.08	15.35	14.51	13.53	12.51	12.38	173.37
1981	12.08	12.41	15.01	15.47	17.00	17.29	17.37	16.22	14.68	13.84	12.39	12.91	176.70
1982	11.90	12.91	15.68	15.82	16.56	17.22	16.10	16.26	14.88	13.83	13.14	12.27	176.58
1983	12.79	12.66	15.07	15.49	16.84	17.01	16.85	17.35	14.84	13.77	13.17		
1984													

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. *Source: Internal Revenue Service*

T.33

U.S. Stocks of Beer (Fermented Malt Liquors) at End of Month In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	12.43	12.99	13.46	14.13	14.20	14.69	14.18	13.76	13.45	13.22	12.96	12.26
1971	12.97	13.20	13.81	14.07	14.40	14.26	14.16	13.64	13.31	13.31	12.78	12.23
1972	12.97	13.64	13.82	14.51	14.45	14.40	14.49	13.76	13.54	13.36	12.77	12.44
1973	13.07	13.70	14.01	14.43	14.48	14.20	14.30	13.81	13.58	13.52	12.93	12.76
1974	13.17	13.56	13.92	14.32	14.31	14.47	14.33	14.04	13.72	13.53	13.04	12.58
1975	13.21	13.54	13.76	14.26	14.17	14.30	14.45	14.18	13.98	13.48	13.20	12.74
1976	13.39	13.33	13.31	13.06	13.53	13.89	14.03	13.92	13.60	13.69	13.48	12.91
1977	14.01	14.17	14.58	15.03	15.57	15.37	15.13	14.45	13.58	13.53	13.02	12.42
1978	13.92	14.07	14.56	15.01	14.99	14.55	19.81	14.33	14.01	13.71	13.50	13.76
1979[2]	14.00	14.06	14.44	14.98	14.74	14.50	14.83	14.30	13.87	12.59	13.37	13.29
1980[2]	13.33	13.83	14.84	15.31	17.44	15.43	14.72	14.45	15.01	14.18	13.94	13.96
1981[2]	13.98	14.95	15.12	15.26	15.78	15.24	14.98	14.53	14.42	13.99	13.38	12.95
1982[2]	14.16	14.93	16.32	15.83	15.59	15.28	14.45	14.31	13.99	14.00	13.43	13.22
1983[2]	13.89	14.46	16.05	16.21	15.84	15.82	15.73	14.98	14.53	14.30	13.92	
1984												

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. [2] Preliminary. *Source: Internal Revenue Service*

T.34

Bismuth

World production of bismuth (which is derived as a byproduct from ores processed for other metals such as lead, copper, tin, and molybdenum) was estimated by the U.S. Bureau of Mines to have declined 8 percent in 1983 from the 1982 level. U.S. production of bismuth is insignificant with the single producing plant operating well below capacity. A small amount of old scrap bismuth is recycled, but most domestic needs are met by imports.

Imports of bismuth by the U.S. in 1983 totaled 1,971,956 pounds, 3 percent lower than the 2,026,245 pounds imported in 1982, according to U.S. Bureau of Mines data. Major sources of U.S. imports of bismuth metal in 1983 were Mexico, Peru, the United Kingdom, and Canada, in order of importance. Imports from the Federal Republic of Germany dropped sharply in 1983.

U.S. exports of bismuth (including alloys, waste and scrap) increased sharply in 1983, to 306,128 pounds from 52,758 pounds in 1982. The United Kingdom was the most important importer again in 1983, accounting for 42 percent of total exports. The Netherlands, which imported no bismuth from the U.S. in 1982, acquired 64,567 pounds in 1983.

Consumption of bismuth metal in the U.S. increased 18 percent from that of 1982 to 2,142,244 pounds, according to preliminary Bureau of Mines data. Reported consumption in the metallurgical additives category recorded the largest year-to-year increase as demand for many capital goods products rebounded sharply in 1983. Bismuth metal consumed in pharmaceuticals and chemicals, which accounted for 51 percent of total use in 1983, was 4 percent smaller than a year earlier. The consumption of bismuth in fusible alloys, which accounted for 31 percent of total use in 1983, increased 15 percent. The use of bismuth in metallurgical additives soared nearly threefold, accounting for 17 percent of total use.

U.S. industry stocks of bismuth on December 31, 1983 amounted to 613,006 pounds, 13 percent larger than the 541,644 pounds on hand at the end of 1982.

U.S. demand for bismuth is expected to increase at an annual rate of about 1.7 percent through 1990 (from a 1978 base), according to a Bureau of Mines estimate. U.S. reported consumption in 1984 is expected to amount to 2.2 million pounds. The steel industry in 1983 continued to experiment with free-machining alloy bar steels that used bismuth as an additive. Research was also conducted on bismuth usage as a smoke and fire retardant and in electronic applications.

The domestic bismuth producer price remained suspended in 1983. However, a major foreign producer's bismuth price was $2.30 per pound at the start of 1983 and continued at this price through the end of the year. The U.S. dealer price was $1.35 to $1.40 per pound in January 1983 and rose to $1.90 to $1.95 by the end of the third quarter before slipping slightly, to end the year at $1.75 to $1.80 per pound.

World Mine Production of Bismuth In Thousands of Pounds

Year	Romania (Ore)	Australia (concentrates)	Bolivia (concentrates)	Canada (Ore)	China (Ore)	France (Metal)	South Korea (Metal)	Yugoslavia (Metal)	Japan (Metal)	Mexico (Metal)	Peru (Metal)	W. Germany (Ore)	USSR (Metal)	World Total
1974	180	2,579	1,351	245	550	125	289	220	1,837	1,583	1,469		130	10,631
1975	180	1,861	1,348	345	550	123	249	122	1,436	1,003	1,354	23	130	8,776
1976	180	1,650	1,349	286	485	139	384	172	1,502	1,228	1,149	24	130	8,689
1977	180	2,054	1,435	363	500	115	293	163	1,538	1,607	1,420	24	140	9,872
1978	180	2,324	677	320	530	N.A.	269	29	1,375	2,156	1,347	20	150	9,412
1979	180	2,200	22	306	570	N.A.	192	50	1,010	1,662	1,162	22	160	7,573
1980	180	2,000	24	377	570	N.A.	271	183	745	1,698	1,096	22	160	7,162
1981[1]	180	1,870	25	271	570	N.A.	220	225	1,054	1,446	1,409	22	165	7,457
1982[2]	180	1,650	10	260	570	N.A.	200	130	1,060	1,370	1,540	22	170	7,161
1983[2]		1,500		200			200		900	1,300	1,400			6,600

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.35

U.S. Salient Statistics of Bismuth In Thousands of Pounds

	Bismuth Consumed, By Uses								Exports	General Imports of Metallic Bismuth from				
Year	Experimental	Metallurgical Additives	Other Alloys	Fusible Alloys	Pharmaceuticals	Other Uses	Total Consumption	Consumer Stocks Dec. 31	of Metal & Alloys	Peru	Mexico	Japan	Total	Price[1] $ Per Pound
1974	.3	668.9	21.4	748.6	838.1	6.6	2,284.0	596.8	329.9	459.2	292.5		1,893.7	8.41
1975	.7	416.2	26.0	401.9	553.3	7.9	1,406.0	451.3	128.9	140.6	161.8		1,331.2	7.72
1976	8.8	455.9	20.3	518.6	1,391.7	15.3	2,410.6	483.8	68.5	569.1	248.1		2,328.1	7.50
1977	.6	461.6	18.6	611.2	1,274.5	13.1	2,379.6	436.1	95.3	632.4	182.2		2,013.3	6.01
1978	.6	485.3	21.8	836.0	1,149.7	18.6	2,511.9	781.9	96.3	334.7	535.3		2,657.8	3.38
1979	3.2	703.8	22.0	721.0	1,248.7	28.5	2,727.2	629.7	427.8	648.7	604.8	185.5	2,167.3	3.01
1980	1.2	467.9	26.5	650.9	1,115.6	26.7	2,288.8	674.0	128.7	619.1	860.4	138.4	2,217.4	2.64
1981	.2	307.0	26.0	657.0	1,387.6	15.0	2,392.7	509.0	78.7	859.3	724.1	124.1	2,436.2	2.30
1982[2]	.5	124.6	21.4	571.6	1,144.8	13.6	1,876.4	541.6	52.8	864.1	699.5	41.4	2,026.2	2.30
1983[3]	.5	354.5	20.0	651.8	1,099.7	9.8	2,126.5	613.0	306.1	653.7	706.6	68.3	1,972.0	2.30

[1] N.Y., average ton lots; effective Oct. 1981, domestic producers' list price was suspended. Major foreign producer price is recorded. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines* T.36

Broilers

The number of chicks hatched for slaughter in the fourth quarter of 1983 was estimated at only 1 percent below fourth-quarter 1982 slaughter. First-quarter 1984 broiler production was forecast at 2 percent below 3,059 million produced in the comparable period in 1983. Very early in 1984, a number of broilers in mid-Atlantic producing regions had to be destroyed because of avian flu. The news temporarily unsettled cash markets, but the number destroyed was negligible compared with either the weekly or the daily average slaughter. More importantly, the slight decline in early 1984 broiler production compared to 1983 was caused by a lessened availability of eggs to be set and to the extremely cold December weather that may have reduced the rate of lay. Cumulative placements of pullets were below year-earlier levels. Broiler deaths due to the searing heat in many producing regions during the summer of 1983 also influenced the somewhat tighter supplies of broilers.

The twelve-city wholesale price of broilers in third-quarter 1983 averaged nearly 54 cents per pound compared with 44 cents in nine cities a year earlier and rose to 62 cents by January 1984. The total output of broiler meat from federally inspected plants during 1983 was 12.4 billion pounds, 3 percent above 1982. The number of birds slaughtered was 4.1 billion head, 1.5 percent above the previous year. Weights averaged 4.08 pounds vs. 4.04 in 1982.

Figured on a yearly basis, broiler production in the first half of 1984 was expected to be steady and then to increase by about 5 percent in the second half of the year in response to projected moderating grain prices.

Broiler Supply and Prices in the United States

Year & Quarters	Federally Inspected Slaughter: Number (Mil.)	Avg. Wt. (Lbs.)	Liveweight Pounds (Mil. Lbs.)	Certified RTC Wt. (Mil. Lbs.)	Total Production RTC[2] (Mil. Lbs.)	Per Capita Consumption (Lbs.)	Prices: Farm (Cents/Lb.)	City[4] (Cents/Lb.)
1980	3,915	3.93	15,409	11,175	11,334	47.0	27.7	46.8
1981	4,076	4.01	16,350	11,906	11,981	48.6	28.5	46.3
I	977	4.02	3,931	2,849	2,870	11.8	30.1	49.3
II	1,069	3.98	4,259	3,096	3,115	12.5	28.1	46.7
III	1,061	3.98	4,220	3,081	3,100	12.6	28.8	47.0
IV	969	4.07	3,939	2,880	2,897	11.7	25.2	42.1
1982[1]	4,068	4.04	16,456	12,039	12,175	50.0	26.9	44.0
I	983	4.03	3,961	2,888	2,924	12.0	27.0	44.8
II	1,047	4.05	4,239	3,109	3,145	12.9	27.6	45.2
III	1,065	4.00	4,265	3,130	3,159	13.1	27.3	44.4
IV	973	4.10	3,991	2,911	2,947	12.0	28.5	41.5
1983[1]	4,130	4.09	16,883	12,381			29.2	49.3
I	1,022	4.10	4,184	3,059	3,095	12.7	26.3	43.4
II	1,084	4.13	4,475	3,277	3,315	13.7	26.4	45.6
III	1,062	4.00	4,254	3,135			32.1	53.9
IV	962	4.13	3,970	2,910			32.0	54.6

[1] Preliminary. [2] Total production equals fed. inspec. slaughter plus other slaughter minus cut-up & further processing condemnation. [3] Forecast. [4] 9-city weighted average. *Source: Commodity Economics Division, U.S.D.A.* T.38

Salient Broiler Statistics in the United States

Year	Commercial[2] Production: Number Millions	Live weight Mil. Lbs.	Average: Live weight Per Bird Lb.	Farm Price ¢ Lb.	Value of Production Mil. $	Total Chickens[3] Supply & Distribution (In Millions of Pounds): Commercial Broilers	Other Chickens	Total	Storage Stocks Jan. 1	Exports & Shipments	Consumption: Military	Civilian Total	Per Capita in Lbs.
1980	3,964	15,544	3.95	27.7	4,304	11,357	752	12,109	142	781	38	11,295	50.1
1981	4,150	16,530	4.01	28.5	4,703	11,992	743	12,736	136	920	36	11,767	51.7
1982[1]	4,068	16,456	4.04	26.9	4,427	12,039	745	12,784	149	675	36	12,222	53.2
1983[1]	4,130	16,883	4.09	29.2	4,930	12,381							

[1] Preliminary. [2] Beginning 1970 data are for the marketing year starting Dec. 1 through Nov. 30. [3] Ready-to-cook basis. *Source: Economic Research Service, U.S.D.A.* T.39

Average Wholesale Broiler[2] Prices[1] RTC In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.	4-Region Ave. Retail Price	Hens[4] 8-16 Lbs. (New York)[3]
1980	45.8	42.7	40.5	38.9	41.1	43.3	52.8	52.4	54.8	51.4	49.7	48.6	46.8		62.6
1981	49.5	50.3	48.2	44.4	46.3	49.3	50.2	47.3	43.6	43.7	42.5	40.1	46.3	73.7	59.7
1982	45.2	44.5	44.8	42.6	45.8	47.0	46.1	43.4	43.6	42.3	40.3	42.0	44.0	71.6	60.8
1983	43.1	45.2	44.9	40.9	47.1	49.1	52.8	54.2	54.5	50.4	56.3	57.1	49.4	72.8	60.5

[1] Prices prior to 1979 are for broilers delivered at Chicago (grade A). Trucklots (U.S. & Plant). [2] Ice packed, ready-to-cook. [3] In retail stores (urban areas), whole or cut-up ready to cook. [4] Prior to 1977 prices are for frying chicken. *Source: Bureau of Labor Statistics* T.37

Burlap and Jute

Jute and Kenaf Production In Thousands of Metric Tons[3]

Crop Year	Jute		Kenaf (Mesta)	
	Bangladesh[4]	India[4]	India[4]	Thailand[5]
1970–1	2,563	1,959	498	661
1971–2	1,702	2,256	456	820
1972–3	2,579	1,975	461	960
1973–4[3]	1,080	1,116	266	570
1974–5	720	805	245	400
1975–6	782	800	265	308
1976–7	877	974	314	183
1977–8	972	961	320	246
1978–9	1,169	——1,169——		320
1979–0	1,210	——1,553——		260
1980–1	814	——1,332——		191
1981–2[1]	765	——1,306——		189
1982–3[2]	762	——1,061——		181
1983–4				

[1] Preliminary. [2] Estimate. [3] Data prior to 1973 are in MILLIONS OF POUNDS. [4] July–June year. [5] Sept.–Aug. year. *Source: Foreign Agricultural Service, U.S.D.A.*

T.40

Average Wholesale Price of Raw Jute, Bang Tossa C., Landed, at New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	16.5	16.8	16.8	16.8	16.8	17.1	17.5	17.5	17.7	17.9	17.9	18.5	17.3
1972	N.A.	18.5	N.A.	N.A.	19.7	19.7	17.8	17.8	17.8	17.8	17.8	N.A.	18.4
1973	17.3	17.6	17.6	18.3	18.3	N.A.	18.9	18.8	18.8	18.8	18.2	18.2	18.3
1974	N.A.	N.A.	N.A.	N.A.	N.A.	19.5	19.5	21.5	N.A.	N.A.	25.8	27.8	22.8
1975	27.8	27.8	27.8	27.8	27.8	23.3	N.A.	23.3	N.A.	23.3	N.A.	20.3	25.5
1976	20.4	19.8	20.4	20.9	20.9	20.2	19.7	19.7	19.7	19.7	19.7	19.7	20.1
1977	20.2	20.2	21.4	21.4	21.4	N.A.	21.9	21.9	21.9	22.1	22.6	N.A.	21.5
1978	N.A.	N.A.	28.3	28.3	27.3	26.8	26.8	26.8	26.0	26.0	26.0	26.0	26.8
1979	26.0	26.0	26.0	25.8	26.0	26.0	25.8	N.A.	32.7	32.7	32.7	32.7	28.4
1980	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	29.0	28.5	29.0	29.0	28.8
1981	N.A.	27.35	27.35	N.A.	29.0	N.A.	29.0	29.0	29.0	29.0	24.0	22.55	27.30
1982	23.50	23.40	23.15	24.50	N.A.	N.A.	23.20	25.50	25.50	25.50	25.50	25.50	24.53
1983	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50
1984	25.50	25.50											

Source: Bureau of Labor Statistics (0155-0231.01)

T.41

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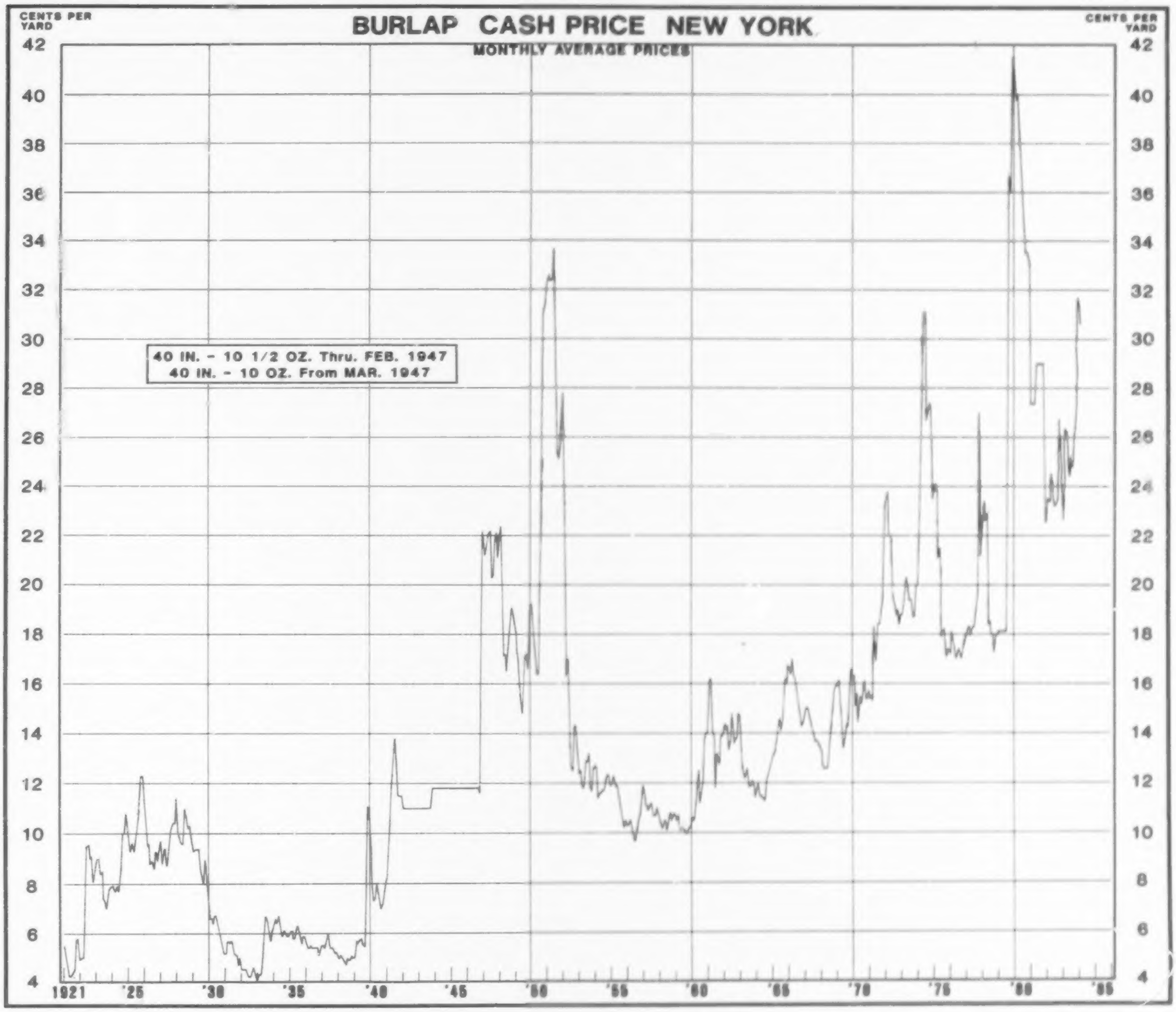

Average Wholesale Price of Burlap (40 Inch—10 Oz.) at New York In Cents Per Yard

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	15.4	15.5	15.3	18.3	16.9	18.1	18.4	18.4	19.0	19.3	19.4	23.2	18.1
1972	23.6	23.8	22.0	22.0	21.8	20.3	19.5	19.0	18.8	19.0	18.4	18.8	20.6
1973	18.8	18.9	19.3	20.3	19.9	19.4	19.4	19.4	18.7	18.7	20.0	20.0	19.4
1974	21.5	23.6	26.3	29.5	31.1	31.1	26.7	27.2	27.4	27.3	25.8	23.5	26.8
1975	24.0	24.1	23.8	21.1	21.5	20.6	17.9	18.2	17.6	17.1	17.4	N.A.	20.3
1976	17.2	18.1	17.9	17.4	17.0	17.2	17.4	17.2	17.0	17.4	17.8	18.0	17.5
1977	N.A.	18.3	18.3	18.0	N.A.	18.3	18.3	19.0	19.6	27.0	21.2	22.8	20.1
1978	23.2	23.4	22.6	22.9	18.4	18.5	18.0	18.0	18.0	17.3	18.0	18.0	19.7
1979	18.1	18.1	18.1	18.1	18.1	18.1	N.A.	35.4	36.7	36.0	40.3	41.5	27.1
1980	N.A.	39.8	40.0	38.5	N.A.	N.A.	N.A.	N.A.	33.5	33.5	N.A.	33.0	36.4
1981	N.A.	27.35	27.35	N.A.	29.0	N.A.	29.0	29.0	29.0	29.0	24.0	22.55	27.36
1982	23.50	23.40	23.15	24.50	N.A.	23.30	23.20	23.35	25.25	26.75	25.50	24.30	23.29
1983	22.65	24.25	26.35	26.20	24.40	25.20	24.75	25.50	26.25	26.95	29.65	31.70	26.15
1984	31.25	30.55											
1985													

Source: Bureau of Labor Statistics (0337-0461.01)

T.42

Butter

World production of butter in 1983 totaled 6.9 million tons, 9 percent above production in 1982. The greatest production increase during 1983 came from the European Community (EC) nations. The EC produced nearly 2.3 million tons of butter—nearly a third of the world's production and compared with 2.1 million tons produced in 1982. The greatest production increase for a single country was registered in the Soviet Union, where milk output rose sharply during the year. The Soviet Union produced 1.6 million tons of butter in 1983 vs. 1.4 million in 1982. Increased Soviet butter production was apparently in proportion to the feeding of high-protein meals to dairy cattle in that country. Much of the world increase in butter production in 1983 can be attributed to governmental price supports that set floors under prices and thus encouraged greater production.

U.S. production of butter during 1983 totaled 593,000 tons vs. 570,000 in 1982. U.S. wholesale prices for dairy products, including butter, had remained mostly unchanged since late 1980 because supplies were generally ample and because Commodity Credit Corporation (CCC) support purchase prices were unchanged. Beginning December 1983, however, the CCC lowered the support price of milk from $13.10 per cwt to $12.60—a support price that will be effective until the end of March 1985. As a result, wholesale prices for butter and other dairy products fell sharply. The price at Chicago for Grade A or higher butter was reduced by 5.75 cents to 143.25 cents per pound.

Because market prices for butter in the U.S. fell below year-earlier levels after the reduction in CCC price supports for milk, trade sources conjectured that domestic disappearance of butter could pick up in 1984, even if it did not achieve 1983 levels. U.S. butter production in 1984 was expected to drop by around 4 percent in the first three quarters of the year. The USDA projected total 1984 U.S. butter production at 545,000 tons, down 9 percent from 1983. U.S. butter stocks were expected to decline slightly during 1984. Trade stocks of butter at the beginning of 1984 were 20 percent higher than stocks beginning 1983.

During 1982/83, the CCC made net purchases totaling 410 million pounds of butter. As of September 30, 1983, the CCC's uncommitted inventory of butter amounted to 391 million pounds, 3 percent lower than a year earlier. The government's 1982/83 commitments of butter for program uses (including school lunch programs, needy persons, PL 480 and Section 416 authorizations, etc.) totaled 422 million pounds, just 12 million more than net butter purchases. On January 1, 1984, the CCC's uncommitted butter inventory was about 12 percent below a year earlier. This decline is expected to continue throughout 1984 because program uses for butter are projected to be about even with 1982/83 uses even though net purchases could be less.

The outlook for most of 1984 calls for almost no change in world milk production. However, foreign milk production was expected to expand around 1.5 percent. As a result, the world's production of butter during 1984 was projected at 7.03 million tons, about 2 percent above 1983 production. The bulk of 1984 production is once again expected to be accounted for by the EC countries and the Soviet Union.

Despite the rapid expansion of worldwide butter production in 1983, world commercial use of butter declined and stocks increased. This has made the 1984 demand for butter on international markets much weaker than a year earlier. World prices fell sharply during 1983, and still lower prices are projected for 1984. During January 1984, butter (82 percent fat, unsalted) delivered to major European parts sold for $1,500 to $1,700 per tonne, down from nearly $2,000 a year earlier.

Early in the second quarter of 1984, EC farm ministers agreed to extend for two months the arrangements for the importation of New Zealand butter into EC countries. New Zealand was expected to continue to be the fourth largest major butter-producing country during 1984. Projected 1984 New Zealand butter production was about 260,000 tons, or about 4 percent of the world total. At the same time, the EC farm ministers failed to agree on a proposed 5-year plan that reportedly would have cut the EC's New Zealand butter imports to about 75,000 tonnes in 1988 compared with 83,000 tonnes projected for 1984 and 87,000 tonnes in 1983. The EC is reportedly willing to continually extend imports of New Zealand butter on a two-month basis until a long-term agreement can be reached. The controversy over imports of New Zealand butter into the EC was heightened early in 1984 at a time when EC stocks of butter were high and EC nations were attempting to hold down production.

Supply and Distribution of Butter in the United States In Millions of Pounds

	Supply					Distribution								93 Score Wholesale Prices	
	Production					Domestic Disappearance — Civilian				Dept. of Agr.				$ Lb.	
Year	Creamery	Farm	Total	Cold Storage Stocks[1] Jan. 1[2]	Imports	Total	Per Capita —Lbs.—	Military	Exports & Shipments[4]	Jan. 1 Stocks[5]	Dec. 31 Stocks[5]	Removed by U.S.D.A. Programs	Total Use	Calif. AA	Chi. AA
1978	994	—	994	185	2	966	4.4	3	5	151	192	112	974	1.2666	1.1058
1979	985	—	985	207	2	1,007	4.5	6	5	192	153	82	1,018	1.4327	1.2374
1980	1,145	—	1,145	178	2	1,012	4.5	5	3	153	268	257	1,020	1.6135	1.4079
1981	1,228	—	1,228	305	3	982	4.3	4	121	268	382	352	1,107	1.6855	1.4897
1982	1,257	—	1,257	429	2	1,030	4.6	20	173	382	439	382	1,222	1.7187	1.4839
1983[3]	1,306		1,306	467			5.1			439		413			
1984[3]				499											

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[1] Commercial. [2] Includes stocks held by U.S.D.A. [3] Preliminary. [4] Includes U.S.D.A. shipments to Territories. [5] Includes butteroil. *Source: Department of Agriculture*

T.43

World (Total) Butter[1] Production In Thousands of Metric Tons

Year	Australia	Brazil	Canada	China	Czechoslovakia	Argentina	Denmark	France	Ireland	W. Germany	Netherlands	N. Zealand	India	Poland	Sweden	USSR	South Africa	Un. Kingdom	United States
1977	118		113	94		30	131	551	105	535	179	263	457		61	1,500	21	134	493
1978	112		102	94		29	140	553	130	564	216	230	460	294	63	1,472	16	161	451
1979	105		106	95		32	131	596	132	568	202	255	475	293	65	1,409	18	161	447
1980	84	100	111	95	128	29	113	618	124	578	179	265	480	294	66	1,388	17	168	519
1981	79	60	125		127	32	109	605	125	545	183	247	485	260	64	1,318	15	170	557
1982[2]	76	55	137		135	32	121	600	135	555	217	248	490	278	70	1,403	15	210	570
1983[3]	88											259				1,620			593

[1] Factory (including creameries and dairies) & farm. [2] Preliminary. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.44

Production of Creamery Butter in Factories in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1977	105.5	95.4	98.4	99.9	103.2	93.0	81.8	77.8	75.0	84.5	81.5	89.5	1,086
1978	107.4	95.5	98.2	97.2	97.6	85.1	71.4	63.2	64.0	70.6	66.5	77.7	994.3
1979	98.4	86.7	89.8	92.4	99.2	83.0	72.5	64.3	60.5	78.0	75.8	84.0	984.6
1980	105.7	99.9	101.1	112.2	116.6	93.9	83.7	75.3	77.0	91.4	84.7	103.6	1,145
1981	123.1	108.4	115.5	117.3	115.5	95.9	82.7	82.3	85.2	99.5	93.4	109.5	1,228
1982[1]	127.3	115.9	123.4		332.9			262.2			295.1		1,257
1983[2]	133.9	120.7	126.1	126.5	121.1	109.6	94.7	83.9	84.2	98.3	98.8	108.5	1,306

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.* T.45

Commercial Disappearance of Creamery Butter in the U.S. In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1977	71.9	53.9	83.6	65.0	56.3	44.8	71.6	72.8	89.1	81.5	74.0	94.3	859.8
1978	68.1	65.9	92.0	79.2	61.0	77.5	68.7	69.8	83.8	72.8	77.4	87.4	903.5
1979	83.1	78.3	88.5	70.7	64.2	68.1	72.5	66.2	63.4	78.4	84.4	78.7	895.0
1980	75.0	86.1	88.8	47.7	54.2	59.4	73.2	78.8	77.3	66.3	78.1	93.5	878.8
1981[1]		188.9			214.2			222.9			243.2		869.2
1982[1]		211.4			217.6			217.3			251.0		897.3
1983[1]		208.3			208.5			219.0			253.0		888.8

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.46

Cold Storage Holdings of Creamery Butter in the U.S., on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1977	47.1	67.6	94.2	106.3	128.3	163.8	197.1	209.0	208.6	203.3	195.4	193.4
1978	184.9	195.7	215.9	235.8	246.2	264.6	282.0	297.7	284.6	266.7	251.8	228.9
1979	206.9	206.7	214.7	210.1	218.2	239.1	260.1	257.3	238.5	218.0	200.4	182.1
1980	177.8	191.0	205.6	217.2	238.1	281.7	295.9	308.0	306.4	302.9	301.5	302.7
1981	304.6	332.1	372.3	407.4	450.4	473.6	507.5	515.5	515.6	489.5	470.0	451.1
1982	429.2	430.3	440.4	447.8	—	—	541.6	—	—	510.0	—	—
1983[1]	466.8	485.4	522.0	533.1	549.7	576.1	588.5	588.4	581.8	555.3	528.9	508.6
1984[1]	499.4	510.6	528.5									

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.47

Wholesale Price of 92 Score Creamery (Grade A, Bulk) Butter at Chicago In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	90.8	90.8	92.7	100.1	100.7	100.7	100.7	100.7	100.7	100.7	100.9	101.5	98.4
1978	100.7	100.7	101.2	105.2	106.7	106.7	107.9	116.7	115.8	115.6	121.1	118.8	109.8
1979	111.3	111.3	114.1	120.7	121.8	121.8	122.7	128.7	127.8	128.8	130.0	130.2	122.4
1980	130.2	130.3	130.4	134.3	136.9	139.0	139.3	144.5	145.1	147.1	147.6	147.7	139.3
1981	147.2	147.2	147.2	147.2	147.3	147.5	147.9	148.0	148.5	150.6	148.9	148.1	148.0
1982		147.6			147.3			148.0			147.9		147.7
1983		147.2			147.3			148.7			146.0		147.3

Source: Economic Research Service, U.S.D.A T.48

Cadmium

Cadmium is a relatively rare element recovered as a byproduct of zinc ore processing and used in its metallic form for plating and alloying.

U.S. refinery production of cadmium metal (primary and secondary) in 1983 was 4 percent lower than in 1982 and accounted for about 77 percent of domestic demand, according to preliminary data of the U.S. Bureau of Mines. The shortfall in production was made up by imports and by stock withdrawals. Production of sulfide was 33 percent larger than a year earlier, and production of other compounds increased by 15 percent in 1983.

Imports of cadmium metals in 1983 declined 5 percent, with the largest reductions occurring in imports from the Federal Republic of Germany, China, the Netherlands, and Peru. Imports of cadmium metal from Australia, and Canada increased in 1983.

Domestic shipments of cadmium metal in 1983 dropped 32 percent from shipments in 1982, according to Bureau of Mines data, while compound shipments increased 33 percent in 1983. The estimated consumption pattern for cadmium in 1983 was coating and plating—35 percent; batteries—25 percent; pigments—20 percent; plastics and synthetic products—15 percent; and alloys and other uses—5 percent. The use of cadmium in nickel-cadmium batteries is considered as likely to have the highest growth potential, and research has provided some potential new uses for cadmium sulfide and cadmium telluride in solar photovoltaic cells. The Bureau of Mines estimates U.S. apparent consumption of cadmium in 1984 at 3,500 metric tons, and production at 1,200 tonnes.

U.S. exports of cadmium metal jumped to 170.3 metric tons in 1983 from the depressed level of only 11.0 tonnes in 1982.

U.S. stocks of cadmium metal held by producers at the end of December 1983 were 41 percent below the year-earlier level; stocks held by compound producers were off 41 percent; and distributor stocks plummeted by 95 percent.

The U.S. producer price for cadmium metal was quoted at $1.00 per pound at the start of 1983 and rose to $1.25 by the end of August, where it remained throughout the remainder of the year. The New York dealer price for the metal was $0.65 to $0.70 per pound at the beginning of the first quarter of 1983 and increased to $0.90 to $0.97 per pound by the end of the third quarter before it dipped to $0.72 to $0.77 early in the fourth quarter. Dealer prices ended 1983 at $0.90 to $0.95 per pound. Merchant cadmium prices spurted upwards early in the second quarter of 1984 to around $1.45 to $1.50 per pound—a two-year high, apparently in response to reduced supplies and improving demand for the metal.

The U.S. stockpile goal for cadmium, as of November 30, 1983, was 5,307 metric tons whereas the total inventory was 2,871 tonnes, according to U.S. Bureau of Mines data.

World Smelter Production of Cadmium Metal In Metric Tons[4]

Year	Australia[3]	Belgium	Canada[3]	Finland	France	W. Germany	Italy	Japan	Mexico (refined)	Norway	Poland	Un. King.	USSR	United States[3]	Zaire	World Total
1974	1,588	2,300	2,740		1,420	2,952	1,166	6,674	1,162	198	780	618	5,700	6,666	598	38,082
1975	1,210	2,094	2,628	239	1,004	2,244	902	5,858	1,292	104	780	606	5,800	4,386	582	33,586
1976[4]	649	1,200	1,314	428	532	1,275	436	2,500	710	80	750	190	2,700	2,047	266	16,998
1977	670	1,440	1,185	527	790	1,336	448	2,844	908	97	754	295	2,750	1,999	246	18,288
1978	747	1,164	1,265	611	694	1,182	378	2,531	897	120	761	291	2,800	1,653	186	17,310
1979	804	1,440	1,455	590	689	1,266	527	2,597	830	115	773	424	2,850	1,823	212	18,654
1980	1,012	1,524	1,033	581	789	1,197	568	2,173	778	130	698	375	2,850	1,578	168	17,953
1981[1]	1,050	1,176	1,274	621	664	1,074	482	1,977	590	117	580	278	2,900	1,603	230	17,242
1982[2]	990	900	1,210	621	650	1,000	450	1,994	550	117	580	278	2,900	1,007	246	16,140
1983[2]	1,000	900	1,200					2,000	550					1,000		16,000

[1] Preliminary. [2] Estimate. [3] Primary & secondary metal. [4] Data prior to 1976 are in THOUSANDS OF POUNDS. *Source: Bureau of Mines*
T.49

Salient Statistics of Cadmium in the United States In Metric Tons[6] of Contained Cadmium

Year	Net Import Reliance as a % of Apparent Consumption	Production: Primary: Metallic	Production: Primary: Producers: Shipments	Production: Primary: Producers: Value Mil. $	Production: Cadmium Sulfide[3]	Imports (for Consumption): Metallic	Imports (for Consumption): Flue Dust[3]	Imports (for Consumption): Total	Price[5] $ per lb.	Exports: Cadmium Metal, Alloys, Dross, Flue Dust	Exports: Value Ths. $	Consumption[4]	Stocks, Dec. 31: Industry: Metallic	Stocks, Dec. 31: Industry: Compounds	Stocks, Dec. 31: Distributors
1974		6,666	6,500	21.4	2,170	3,970	332	4,302	4.09	62	238	12,100	1,396	330	
1975[6]	41	1,990	742	4.2	895	2,375	314	2,689	3.36	180	589	3,055	1,881	121	
1976	64	2,047	2,707	10.5	729	3,094	223	3,317	2.66	229	713	5,381	1,242	148	
1977	51	1,999	1,837	7.1	639	2,332	13	2,345	2.96	107	316	3,818	1,452	72	255
1978	63	1,653	1,957	5.9	698	2,881	—	2,881	2.45	326	864	4,510	1,152	45	296
1979	64	1,823	2,468	9.5	813	813	—	2,572	2.76	211	550	5,099	517	52	327
1980	55	1,578	1,271	5.2	801	2,617	—	2,617	2.84	236	464	3,534	841	42	439
1981	63	1,603	1,382	3.8	527	3,090	—	3,090	1.93	239	332	4,378	1,077	68	215
1982[2]	73	1,007	1,832	2.6	374	2,305	—	2,305	1.11	11	126	3,707	635	167	150
1983[1]	69	963	1,242			2,191	—	2,191	1.10	170			373	92	8

[1] Estimate. [2] Preliminary. [3] Cd content. [4] Apparent Primary cadmium in all forms. [5] Producer to consumer in 1 to 5 ton lots, average. [6] Data prior to 1976 are in THOUSANDS OF POUNDS. *Source: Bureau of Mines*
T.50

Castor Beans

World production of castorseed in the 1983/84 season (October/September) was estimated by *Oil World* late in 1983 at 918,000 metric tons, 5 percent larger than estimated 1982/83 production. Production in India, now the world's largest producer, was expected to increase slightly from estimated 1982/83 output of 155,000 tonnes, while a sizeable production increase was expected for China, from the previous season's estimated output of 155,000 tonnes. China is now the world's second largest producer of castorseed. Production of castorseed in Brazil, the world's third largest producer, was expected to be considerably below the preceding season's estimated production of 192,000 tonnes—and the lowest in about 10 years.

Castor oil production worldwide was expected to increase in 1983/84 by about 7 percent above estimated 1982/83 production of 323,000 metric tons, with most of the increase expected to occur in China and India. World stocks of castor oil at the start of the 1983/84 season (October 1, 1983) were reported to be at an unusually low level. Accordingly, 1983/84 supplies were expected to be relatively tight despite an increase in estimated production.

World exports of castor oil were expected to be below the average of recent years, partly because of the ban on the importation of tallow by India for religious reasons, which should lead to increased domestic use of castor oil and a corresponding reduction in export potential.

The tight castor oil supplies early in the 1983/84 season (due in part to a significant reduction in estimated 1982/83 season Brazilian output) resulted in sharply higher prices and prompted some EC consumers to substitute synthetic materials for castor oil. U.S. imports of castor oil in calendar year 1983 totaled 33,676 metric tons compared with 29,347 tonnes in 1982. Imports from Brazil were slightly lower than a year earlier, but accounted for 69 percent of total imports. Imports from India and Thailand increased in 1983.

World Production of Castor Beans In Thousands of Metric Tons

Crop Year	China	Brazil	Ecuador	Ethiopia	India	Romania	Iran	Israel	Mexico	Pakistan	Thailand	USSR	Rep. of So. Afr.	Sudan	World Total
1974	67	573	16	11	229	10	4	8	4	13	32	74	5	15	1,088
1975	70	353	13	10	210	12	4	8	8	14	48	52	5	16	858
1976	70	222	10	10	143	5	4	8	6	8	43	41	5	2	614
1977–8	79	277	10	11	217	5	4	8	6	19	37	45	5	2	765
1978–9	98	388	11	11	229	6	4	8	6	19	37	43	5	9	918
1979–0	110	325	10	10	233	6	4	8	4	19	26	62	5	9	876
1980–1[1]	120	320	11	110	275	6	3	8	6	20	22	59	5	10	812

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T 51

Salient Statistics of Castor Oil in the United States In Millions of Pounds

Year Beginning Oct. 1	Supply: Imports	Supply: Stocks Oct. 1	Supply: Total	Disappearance: Exports	Domestic: Per Capita (in Lbs.)	Domestic: Total	Paint & Varnish	Fatty Acids	Resins & Plastic	Lubricants & Oils	Other Inedible	No. 1 Braz. N.Y.[2] ¢ Lb.
1973–4	123.0	12.3	135.3	—	0.55	117.1	7	3	8	6	93	52.6
1974–5[1]	86.2	18.2	104.5	—	0.41	88.6	—	—	5	6	79	44.0
1975–6[1]	116.2	15.9	132.1	—		92.1						31.5
1976–7[1]	117.7	44.5	162.2	—		106.6						33.3
1977–8[1]	264.3	31.0	295.3			104.7						43.4
1978–9[1]		17.5										41.8
1979–0[1]												44.9
1980–1[1]												34.5

[1] Preliminary. [2] Tanks, imported–calendar year. *Source: Economic Research Service, U.S.D.A.* T 52

Monthly Average Wholesale Prices of Castor Oil[1] at New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	29.00	27.50	27.50	27.50	27.50	31.50	35.00	38.50	39.00	39.00	39.00	39.00	33.33
1977	39.00	39.00	40.00	40.00	45.00	45.00	45.00	45.00	45.00	46.00	46.00	46.00	43.42
1978	46.10	46.50	46.50	46.30	46.20	40.30	39.40	37.90	37.90	37.90	37.90	37.90	41.73
1979	37.90	37.90	37.80	37.80	37.80	38.40	41.30	50.90	53.10	54.10	56.00	56.00	44.92
1980	55.70	55.70	55.80	55.60	55.00	52.00	51.00	49.80	48.00	46.50	45.30	46.00	51.37
1981	46.70	45.90	45.00	45.00	44.60	44.10	43.50	44.30	43.70	43.30	43.30	43.30	44.39
1982	42.80	43.30	43.30	43.30	44.70	45.90	46.50	45.50	45.50	45.50	45.50	45.50	44.78
1983	45.50	45.50	45.50	46.80	49.50	49.50	53.40	61.80	78.50	78.50	78.50	78.50	59.29
1984	78.50	78.50	78.50										

[1] Average wholesale, TANK CARS, IMPORTED BRAZIL. *Source: Foreign Agricultural Service, U.S.D.A.* T 53

Cattle and Calves

The number of cattle and calves on U.S. farms in 1983 continued on a decline that had begun in 1982. On January 1, 1984, cattle and calves on U.S. farms totaled 114 million head vs. 115.2 million in 1983. The beef cow inventory was nearly 1 percent under a year earlier and was down more than 4 percent from January 1, 1982. Beef replacement heifers being held for possible herd expansion on the first of 1984 were down 2 percent vs. a year earlier. The USDA estimated the 1983 calf crop at 44.1 million head, 1 percent below 1982 and 2 percent below 1981. Almost 71 percent of these calves were born in the first half of 1983.

A severe drought in the summer of 1983 forced larger numbers of cattle onto the slaughter market in the second half of the year. After declining 1 percent from year-earlier levels in the first half of 1983, cow slaughter rose by 7 percent, or 300,000 head, in the second half of the year. The inducement to slaughter beef cattle was partly influenced by a lowering of U.S. support prices for milk and a resulting increase in the slaughter of dairy cattle. The slaughter of non-fed steer and heifers declined 27 percent below year-earlier levels in the first half of 1983. However, this non-fed slaughter rose 8 percent in the second half of the year because of drought and soaring prices for grain.

As of January 1, 1984, the number of cattle on feed in the 13 major cattle feeding states was 4 percent under a year earlier but 10 percent above the 1982 level. Marketings in fourth-quarter 1983 rose 1 percent from the comparable period in 1983 despite reduced December 1983 marketings resulting from severe winter storms. Fourth-quarter net feedlot placements rose by 56 percent and 23 percent, respectively, in the major wheat grazing areas of Texas and Kansas where large wheat supplies and favorable prices compared to corn encouraged cattle feeding. However, feedlot inventories in Iowa registered declines.

In 1984, the number of heifers calving and entering the cow herd may decline slightly. Because of extreme hot temperatures in the summer of 1983 and the poor forage in many areas since that time, the calving rate, particularly for first-calf heifers, is likely to be reduced in 1984. A large grain crop in the fall of 1984 could mean feeder cattle prices at an unseasonally strong premium to fed cattle prices.

Futures Markets

Live beef cattle futures and feeder cattle futures are traded on the Chicago Mercantile Exchange, and a smaller live cattle futures contract is traded on the MidAmerica Commodity Exchange in Chicago.

World Cattle and Buffalo Numbers In Millions of Head

Year	Argentina	Australia	Brazil	Canada	China	Colombia	France	W. Germany	India	Poland	Turkey	Mexico	South Africa	USSR	Un. Kingdom	United States	World Total[1]
1981	58.8	25.2	93.0	12.2	95.0	24.4	23.6	15.1	241.5	11.3	16.9	34.2	13.2	115.1	13.1	114.3	934
1982[2]	57.9	24.6	93.0	12.1		24.3	23.5	15.0	242.0	11.5	17.0	33.0	13.4	115.9	13.0	115.6	934
1983[1]	58.9	22.5	93.0	11.6		24.4	23.7	15.1	242.5	11.0	17.1	30.0	13.5	117.2	13.2	115.2	931
1984[1]	60.3	21.7		11.3										119.0		115.0	

[1] Estimate. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.54

U.S. Cattle on Feed in 7 States In Thousands of Head

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Annual
1981	7,863	7,505	7,126	6,837	7,030	7,054	6,846	6,451	6,289	6,596	7,113	7,328	7,863
1982	7,201	7,055	6,869	7,024	7,066	7,363	7,181	6,836	6,817	7,153	8,143	8,324	7,201
1983	8,316	8,052	7,604	7,268	7,221	7,331	7,275	6,873	6,691	6,951	7,683	7,814	8,316
1984	8,006												

Source: Economic Research Service, U.S.D.A. T.54a

U.S. Cattle Placed on Feedlots in 7 States In Thousands of Head

Year	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec	Total
1981	1,277	1,190	1,383	1,721	1,619	1,323	1,082	1,419	1,845	2,072	1,637	1,301	17,814
1982	1,457	1,320	1,798	1,565	1,853	1,420	1,205	1,731	1,994	2,660	1,785	1,533	20,261
1983	1,509	1,179	1,394	1,566	1,843	1,582	1,190	1,566	2,003	2,460	1,711	1,736	19,739
1984	1,566												

Source: Economic Research Service, U.S.D.A. T.54b

U.S. Cattle Marketings in 7 States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1981	1,525	1,440	1,553	1,386	1,400	1,449	1,412	1,526	1,452	1,470	1,315	1,340	17,198
1982	1,522	1,413	1,547	1,414	1,413	1,510	1,482	1,689	1,575	1,527	1,485	1,430	18,007
1983	1,643	1,506	1,593	1,470	1,583	1,560	1,498	1,659	1,672	1,626	1,459	1,425	18,694
1984	1,569												

Source: Economic Research Service, U.S.D.A. T.54c

Cattle Supply and Distribution in the United States In Thousands of Head

Year	Cattle & Calves on Farms Jan. 1	Imports	Calves Born	Total Supply	Livestock Slaughter—Cattle and Calves: Commercial: Federally Inspected	Other[2]	All Commercial	Farm	Total Slaughter	Deaths on Farms	Exports	Total Disappearance
1980	111,192	681	44,998	156,871	33,936	2,458	36,395	401	36,795	5,413	66	42,274
1981	114,321	659	44,776	159,756	35,273	2,478	37,751	400	38,151	4,897	88	43,136
1982	115,604	1,005	44,420	161,029	36,636	2,211	38,864	400	39,264	5,449	58	44,771
1983[1]	115,199	921	44,093	160,213	37,180	2,559	39,739	408	40,147	5,544	56	47,747
1984[1]	114,040											

[1] Preliminary. [2] Wholesale and retail. *Source: Economic Research Service, U.S.D.A.* T.56

U.S. Cattle on Feed in 13 States, Quarterly In Thousands of Head

Year		I	II	III	IV	Year		I	II	III	IV
1979	Number on Feed[1]	11,233	9,797	9,248	8,965	1982	Number on Feed[1]	9,028	8,818	8,981	8,800
	Placed on Feed	5,423	5,751	5,469	7,280		Placed on Feed	5,572	5,781	5,846	7,216
	Marketings	6,218	5,619	5,434	5,328		Marketings	5,443	5,209	5,773	5,374
1980	Number on Feed[1]	10,399	9,042	8,631	8,975	1983[2]	Number on Feed[1]	10[illegible]	9,153	9,070	8,465
	Placed on Feed	4,849	5,254	5,832	6,613		Placed on Feed	[illegible]	5,894	5,583	7,252
	Marketings	5,691	5,128	5,223	5,264		Marketings	[illegible]	5,527	5,891	5,416
1981	Number on Feed[1]	9,845	8,666	8,646	8,210	1984[2]	Number on Feed[1]	[illegible]			
	Placed on Feed	4,816	5,590	5,275	6,193		Placed on Feed				
	Marketings	5,557	5,113	5,460	5,034		Marketings	5,752			

[1] Beginning of Period. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.56a

United States Beef Supply and Utilization

Year		Commercial production	Farm production	Beginning stocks	Imports	Total supply	Exports	Shipments	Military purchases	Ending stocks	Total disappearance	Per capita disappearance	Retail weight per capita	Population
		Million Pounds										*Pounds*		*Million*
1980	I	5,249	61	350	524.87	6,184.87	48.21	13.24	61	335	5,727.41	25.50	18.87	224.60
	II	5,251	26	335	462.14	6,074.14	35.85	13.15	44	257	5,724.14	25.41	18.80	225.30
	III	5,384	26	257	509.21	6,176.21	46.45	9.96	44	220	5,855.80	25.92	19.18	225.90
	IV	5,585	61	220	567.66	6,433.65	42.67	10.84	40	328	6,012.14	26.54	19.64	226.50
	Year	21,469	174	350	2,063.88	24,056.87	173.18	47.18	189	328	23,319.51	103.37	76.50	225.60
1981	I	5,561	61	328	447.80	6,397.80	61.40	10.09	49	342	5,935.30	26.16	19.36	226.90
	II	5,435	26	342	418.00	6,221.00	46.96	9.64	58	297	5,809.40	25.55	18.90	227.40
	III	5,541	26	297	508.77	6,372.70	47.09	10.38	53	235	6,027.23	26.44	19.56	228.00
	IV	5,677	62	235	368.49	6,342.49	60.47	5.70	35	257	5,984.33	26.18	19.37	228.60
	Year	22,214	175	328	1,742.99	24,459.99	215.92	35.80	195	257	23,756.27	104.32	77.20	227.70
1982	I	5,455	59	257	367.93	6,138.93	55.45	12.54	36	212	5,822.93	25.42	18.81	229.10
	II	5,363	25	212	538.37	6,138.37	65.56	14.74	39	190	5,829.07	25.39	18.79	229.60
	III	5,730	26	190	655.72	6,601.72	55.83	15.09	35	248	6,247.80	27.14	20.08	230.20
	IV	5,818	60	248	377.16	6,503.16	72.90	12.93	25	294	6,098.32	26.42	19.55	230.80
	Year	22,366	170	257	1,939.18	24,732.18	249.74	55.30	135	294	23,998.13	104.37	77.23	229.90
1983	I[1]	5,525	59	294	527.89	6,405.89	66.81	10.35	28	299	6,001.73	25.95	19.20	231.30
	II	5,549	25	299	516.67	6,389.67	61.96	10.27	34	254	6,029.44	26.01	19.25	231.80
	III	6,012	26	254	539.04	6,831.04	71.62	9.14	34	269	6,447.28	27.74	20.53	232.40
	IV	5,974	60	269	347.47	6,650.47	71.71		25	325				233.00
	Year	23,060	170	294	1,931.07	25,455.07	272.10		121	325				232.00

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.56b

Condition[1] of Pasture and Range Feed in the United States, on First of Month In Percent of Normal

Year	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1980	76	80	81	78	60	61	63	65	63
1981	70	79	80	84	82	82	80	80	78
1982	81	79	87	90	86	82	81	80	N.A.
1983	84	80	85	88	76	63	66	73	N.A.
1984	74								

[1] Indicates current supply of feed for grazing on non-irrigated pastures & ranges relative to that expected from existing stands under very favorable weather conditions. [80 & over, good to excellent; 65–79, poor to fair; 50–64, very poor; 35–49, severe drought; under 35, extreme drought.] Source: *Statistical Reporting Service, U.S.D.A.* T.57A

CATTLE AND CALVES

Weekly Federally Inspected Cattle Slaughter in the United States In Thousands of Head

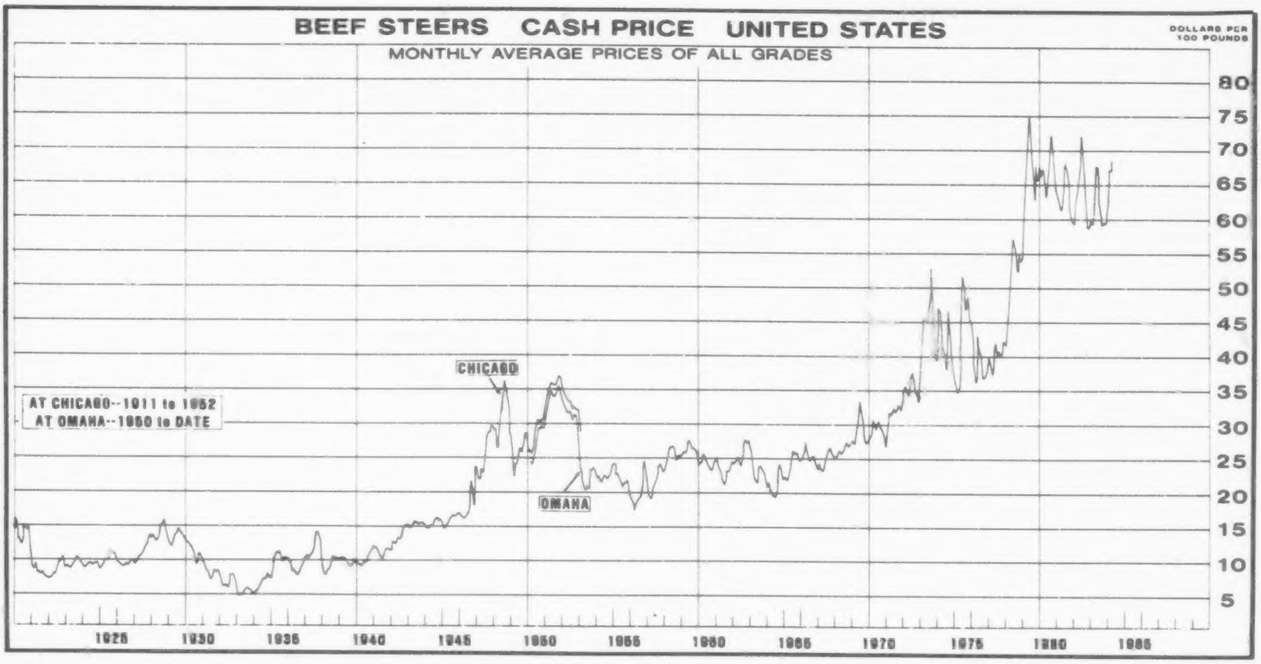
Week ended 1983	Cattle			Steers			Cows		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Jan. 1[1]	531	555	589	273	268	292	106	115	133
8	691	682	606	347	299	277	143	159	164
15	694	725	699	353	337	325	128	156	180
22	682	693	707	337	329	339	142	140	163
29	653	667	693	329	325	333	142	132	169
Feb. 5	640	637	657	322	312	318	130	119	159
12	680	668	689	352	330	344	134	126	150
19	617	631	683	312	310	326	130	126	153
26	655	624	666	344	326	317	133	114	146
Mar. 5	614	621	684	320	306	329	119	112	139
12	636	615	675	324	312	324	123	108	145
19	593	628	689	298	322	342	120	114	143
26	619	608	644	321	299	319	120	113	135
Apr. 2	596	589	650	304	283	312	119	112	139
9	600	588		329	287		110	119	
16	593	644		298	333		124	121	
23	627	636		318	316		127	127	
30	627	623		324	326		120	118	
May 7	668	649		344	332		123	127	
14	654	675		334	339		124	126	
21	664	669		339	333		130	127	
28	640	684		314	333		135	130	
June 4	554	591		278	293		108	109	
11	654	690		331	338		125	128	
18	656	675		331	324		127	126	
25	641	658		316	313		122	132	
July 2	660	662		323	325		126	129	
9	563	590		278	304		100	97	
16	671	682		318	330		129	135	
23	625	652		293	312		121	127	
30	634	661		292	323		122	126	
Aug. 6	667	688		311	329		125	131	
13	678	710		306	338		127	140	
20	690	706		318	338		129	143	
27	692	708		325	339		133	142	
Sept. 3	683	735		330	354		138	155	
10	607	644		290	304		117	125	
17	725	759		347	351		145	154	
24	705	721		322	313		146	159	
Oct. 1	712	746		326	332		145	167	
8	722	736		323	327		152	165	
15	730	734		329	332		147	165	
22	705	725		297	315		162	172	
29	710	728		305	320		170	180	
Nov. 5	693	704		298	302		164	182	
12	666	698		282	318		166	162	
19	691	709		299	309		173	180	
26	544	580		244	268		159	137	
Dec. 3	691	702		310	320		164	176	
10	688	732		309	318		170	199	
17	662	704		298	331		160	171	
24	531	625		250	303		113	144	

[1] Corresponding date: January 2 1982. *Source: Economic Research Service, U.S.D.A.* T.57b

Beef Steer-Corn Price Ratio at Omaha[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1981	19.2	19.3	19.4	20.0	20.6	21.4	21.5	23.8	26.0	25.2	25.0	25.0	22.2
1982	24.6	25.9	26.5	26.5	27.2	26.5	26.1	29.2	27.5	27.7	25.1	25.2	26.5
1983	24.5	23.4	22.7	21.9	21.8	21.2	19.6	18.1	17.8	18.4	18.3	19.8	20.6
1984	21.6												

[1] Bushels of No. 2 Yellow Corn Equal in Value to 100 Pounds Liveweight of Choice Slaughter Steers, 900–1100 lbs. *Source: Economic Research Service, U.S.D.A.* T.56c



Average Wholesale Prices of Beef Steers at Omaha, Choice (900–1100 Lbs.) In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	43.62	45.02	48.66	52.52	57.28	55.38	54.59	52.40	54.26	54.93	53.82	55.54	52.34
1979	60.35	64.88	71.04	75.00	73.99	68.53	67.06	62.74	67.84	65.81	67.00	67.78	67.75
1980	66.32	67.44	66.88	63.07	64.58	66.29	70.47	72.31	69.68	67.18	65.05	64.29	66.96
1981	63.08	61.50	61.40	64.92	66.86	68.26	67.86	66.37	65.37	61.45	59.81	59.24	63.84
1982	60.75	63.54	65.80	69.11	72.10	70.18	66.18	65.14	61.25	58.78	58.91	59.82	64.30
1983	59.33	61.20	64.03	67.70	67.51	65.90	62.22	61.27	59.19	59.58	59.41	62.85	62.52
1984	67.08												

Source: Economic Research Service, U.S.D.A. T.65

Average Prices of Steers (Stocker & Feeder) Kansas City In Dollars Per 100 Pounds

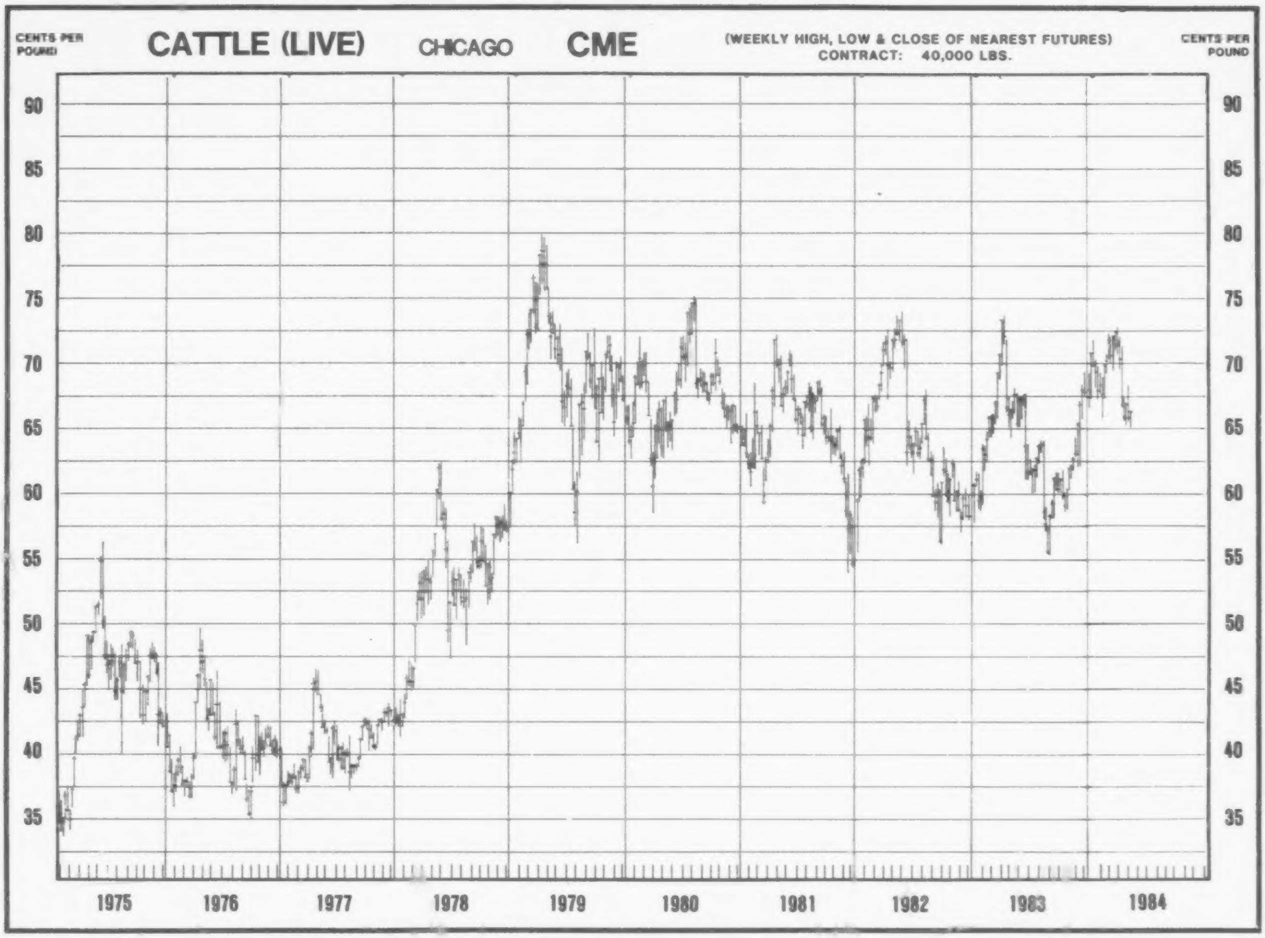
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	42.85	46.89	51.39	53.81	59.85	57.42	58.67	58.22	60.23	62.06	60.75	64.19	56.16
1979	69.95	75.61	82.55	86.83	82.20	75.00	72.07	72.37	77.81	76.34	78.92	77.55	77.60
1980	76.52	78.35	72.67	66.89	65.52	68.83	69.48	71.92	71.53	71.64	70.23	70.04	71.30
1981	68.56	68.41	65.47	66.28	63.10	63.51	61.51	64.15	64.58	62.52	61.77	58.96	64.26
1982	59.22	62.37	63.96	64.72	66.07	63.70	64.17	66.42	63.55	62.21	61.24	59.17	62.79
1983	63.70	66.34	66.71	65.90	63.88	60.41	58.21	59.58	55.81	56.97	58.12	61.00	61.39
1984	64.39												

Source: Economic Research Service, U.S.D.A. T.61

Federally Inspected Slaughter of Cattle in the United States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	3,238	3,047	3,243	2,969	3,215	3,052	2,869	3,247	3,027	3,180	3,029	2,834	36,948
1979	3,090	2,559	2,670	2,366	2,622	2,554	2,492	2,862	2,390	2,837	2,593	2,470	31,844
1980	2,739	2,486	2,403	2,540	2,616	2,533	2,667	2,684	2,739	3,003	2,507	2,725	31,642
1981	2,803	2,483	2,726	2,625	2,593	2,770	2,765	2,772	2,846	2,939	2,668	2,829	32,819
1982		8,183			8,192			8,770			8,762		33,907
1983[1]	2,893	2,554	2,828	2,615	2,820	2,992	2,736	3,220	3,160	3,107	2,905	3,001	34,831
1984[1]													

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.66

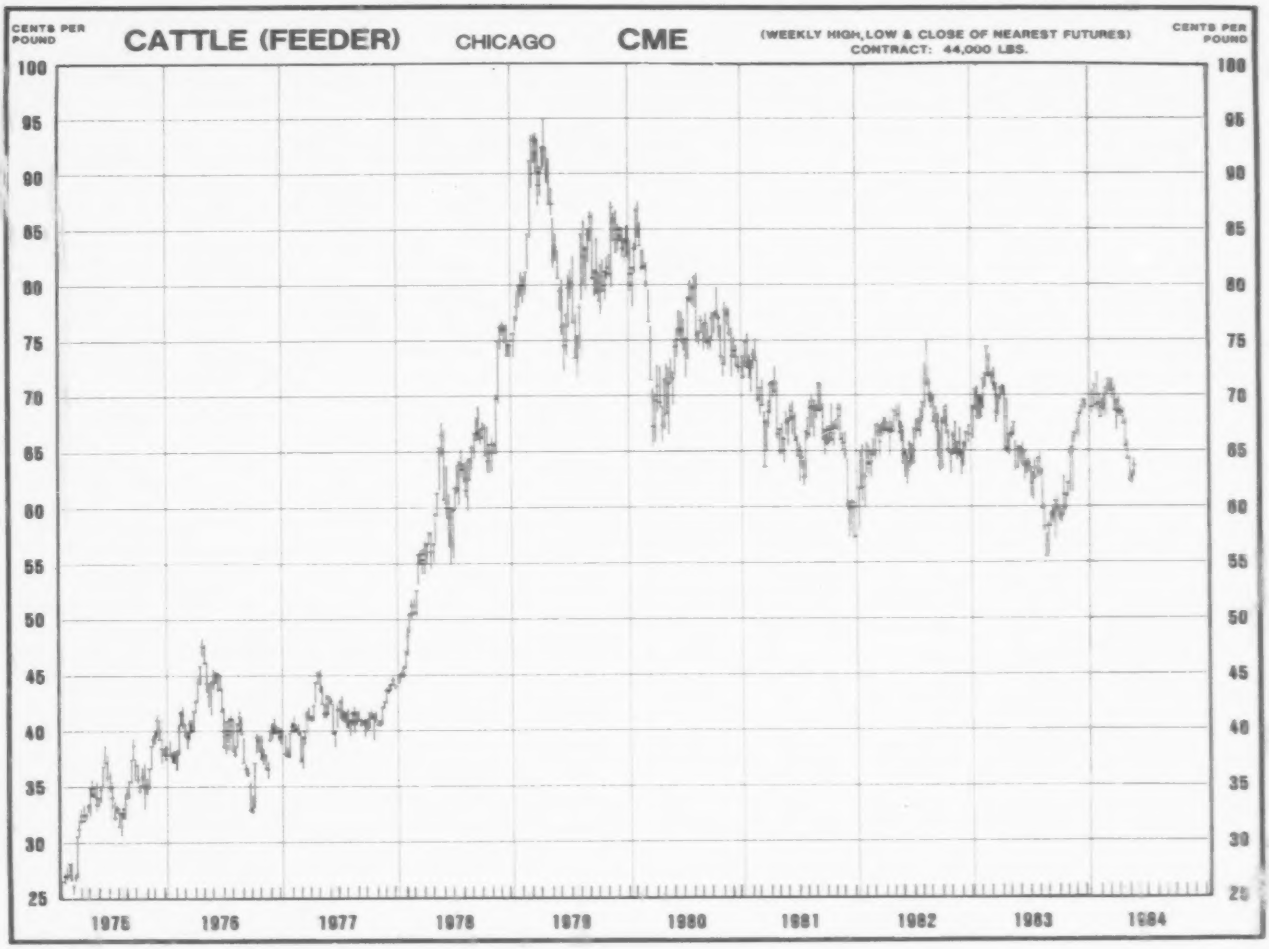


High, Low & Closing Prices of June Live Beef Cattle Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	47.20	46.40	44.55	42.60	40.35	39.65	40.20	41.85	43.30	45.17	47.62	53.10	53.75	62.35	60.95	62.35
	Low	45.85	43.65	41.40	40.20	37.40	38.55	38.82	39.40	41.10	42.20	44.65	46.25	49.10	53.45	54.15	37.40
	Close	46.12	44.35	42.55	40.40	38.80	39.55	39.60	41.35	43.02	45.17	46.32	50.47	53.27	60.97	56.15	—
1979	High	53.65	60.27	58.75	59.57	57.85	60.60	61.90	62.25	64.50	67.90	70.50	74.22	79.75	79.12	72.97	79.75
	Low	49.90	53.65	51.10	54.40	53.45	57.05	57.25	58.25	61.20	63.00	64.65	69.52	70.75	70.10	68.05	48.60
	Close	53.60	58.35	55.70	57.60	57.07	59.62	60.25	61.30	63.55	67.67	70.20	71.35	78.35	71.97	68.15	—
1980	High	75.00	74.50	73.60	74.40	72.85	74.30	76.10	76.95	75.80	76.00	75.10	73.77	67.20	67.50	69.50	76.95
	Low	69.20	70.55	68.10	65.45	64.05	70.40	69.12	72.05	72.02	67.70	71.35	63.22	60.25	62.80	63.35	60.25
	Close	73.75	70.90	71.40	66.30	72.62	73.75	72.57	74.92	75.05	71.80	71.95	63.60	64.82	65.30	69.02	—
1981	High	—	—	—	75.25	74.92	76.00	76.60	76.50	76.35	72.65	71.42	68.55	72.40	70.72	70.97	76.60
	Low	—	—	—	70.80	71.80	72.85	72.90	73.67	69.40	68.05	66.65	63.17	70.10	66.22	67.62	63.17
	Close	—	—	—	73.95	74.87	73.55	74.37	76.07	71.32	68.72	67.77	68.55	70.17	68.17	69.35	—
1982	High	72.30	71.90	70.40	67.95	66.97	67.35	66.72	66.05	63.55	61.60	64.75	66.87	70.10	73.65	74.00	74.00
	Low	70.40	68.05	66.85	64.82	64.02	64.42	64.60	61.80	54.75	56.00	60.65	62.72	66.20	69.30	69.57	54.75
	Close	70.40	69.80	67.00	67.02	65.37	65.27	65.20	63.30	55.77	61.40	62.92	66.42	69.57	73.37	70.00	—
1983	High	—	65.50	63.30	64.55	63.72	63.25	62.50	61.80	62.00	63.90	66.47	69.77	71.15	68.05	67.70	71.15
	Low	—	63.90	60.00	60.50	61.77	58.40	58.02	58.52	58.55	60.75	62.90	64.80	65.10	64.30	65.75	58.02
	Close	—	64.10	62.75	62.85	62.30	59.27	59.62	60.80	61.10	62.72	65.27	69.62	66.12	66.05	66.85	—
1984	High	—	—	62.25	64.65	66.55	65.70	65.55	66.30	67.65	68.35	69.35	69.85				
	Low	—	—	61.35	61.10	62.95	63.00	63.20	63.60	65.05	65.45	65.10	67.00				
	Close	—	—	61.80	64.15	63.25	64.90	63.75	65.45	67.05	66.05	69.10	68.70				

Source: Chicago Mercantile Exchange

T.62



Month End Open Interest of Live Beef Cattle Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	59,234	72,397	84,902	84,016	95,783	74,827	79,734	86,634	91,351	91,719	91,163	88,797
1979	97,005	96,410	84,814	75,913	65,881	60,296	57,506	59,621	75,371	55,978	64,729	62,872
1980	57,192	60,701	50,406	55,582	53,319	59,162	67,059	57,314	58,815	58,009	64,570	45,864
1981	45,325	45,425	48,336	54,045	48,667	50,162	44,597	53,142	51,267	54,025	61,763	51,226
1982	51,036	51,082	61,160	58,383	61,341	48,314	44,024	44,645	42,694	42,412	44,085	45,115
1983	49,014	56,500	59,992	59,771	58,548	47,307	42,292	49,524	52,174	48,215	49,014	51,629
1984	54,669	57,351	59,793									

Source: Chicago Mercantile Exchange T.64

Volume of Trading of Live Beef Cattle Futures at Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	23.80	314.4	468.6	458.6	580.4	597.4	459.2	498.6	500.3	602.3	433.9	440.6	5,040.0
1979	534.2	526.1	660.3	697.4	720.1	586.5	554.2	683.4	553.5	674.3	554.4	470.5	7,214.8
1980	646.0	545.5	562.0	568.6	499.5	460.7	604.3	443.8	461.1	461.0	348.3	395.2	5,997.0
1981	354.8	347.8	430.7	416.4	350.0	361.0	320.8	329.3	348.9	327.7	335.3	359.7	4,282.4
1982	387.2	332.5	434.3	355.8	389.3	458.4	340.2	326.0	353.1	421.2	337.4	305.6	4,441.0
1983	370.4	332.7	455.8	489.0	389.1	328.9	302.2	324.9	344.1	335.4	297.9	277.9	4,248.2
1984	457.4	397.6	404.2										

Source: Chicago Mercantile Exchange T.63

CATTLE AND CALVES

Farm Value, Income & Wholesale Prices of Cattle & Calves

Year	United States			At Omaha					Feeder Steers All Weights at K.C.	Cows, Utility Omaha	Vealers, Choice So. St. Paul	Cows, Commercial Omaha	Beef, Dressed[4]		
	Farm Value of All Cattle—Jan. 1		Gross Income From C. & C.[2] Million $	Steers[3]			Heifers								
	Per Head $	Total Million $		Prime	Choice	Good	Good	Choice					Steer, Choice	Heifer, Choice	Cow[5] Canners[6]
				Dollars Per 100 Pounds											
1975	159	21,000	17,978	41.39	44.61	39.45	37.60	43.12	33.42	21.09	40.44	21.63	73.64	71.62	43.09
1976	190	24,335	19,795	N.A.	39.11	35.87	34.10	37.98	37.65	25.31	45.18	26.08	60.96	59.75	52.00
1977	206	25,249	20,708	N.A.	40.38	36.70	35.20	38.96	38.75	25.32	48.19	26.11	62.66	60.94	51.55
1978	232	27,030	28,813	N.A.	52.34	47.98	46.11	50.30	56.16	36.78	69.24	37.80	80.80	78.58	74.61
1979	403	44,698	35,128	N.A.	67.67	63.05	61.47	65.91	77.60	50.10	91.41	50.06	101.72	100.00	100.48
1980	502	55,831	32,083	N.A.	67.05	62.16	61.22	64.90	71.30	45.72	75.52	44.91	104.39	101.86	92.45
1981	475	54,292	30,183	N.A.	63.84	59.83	59.46	62.05	64.26	41.93	77.25	41.59	99.85	97.48	84.06
1982[1]	415	47,967	30,474	N.A.	64.22	59.47	59.82	62.79	62.79	39.96	77.70	40.35	101.68	98.54	78.96
1983[1]	406	46,769		N.A.	62.52	56.99	56.75	61.45	61.39	39.35	72.97	39.41			
1984[1]	396	45,119													

[1] Preliminary [2] Excludes interfarm sales & Gov't. payments. Cash receipts from farm marketings plus value of farm home consumption. [3] Weighted average prices of beef steers, sold out of first hands for slaughter. [4] Carlots. [5] All weights. [6] And cutter. *Source: Statistical Reporting Service, U.S.D.A.* T.60

Average Price Received by Farmers for Beef Cattle In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1975	27.40	26.80	27.80	31.60	35.30	36.80	35.20	32.30	34.00	33.40	32.30	33.50	32.20
1976	32.80	33.90	33.40	38.00	37.10	36.40	33.60	33.00	32.30	32.20	31.20	32.40	33.90
1977	32.20	33.20	33.80	35.30	36.30	34.00	34.90	34.50	34.70	35.10	34.30	35.50	34.40
1978	37.70	40.50	44.00	47.20	50.50	51.10	50.10	49.30	52.20	53.20	51.90	54.60	48.50
1979	60.20	64.70	70.60	73.40	71.90	66.80	65.50	62.20	66.80	64.60	63.90	64.40	66.10
1980	63.80	67.00	64.40	60.60	60.70	61.10	63.20	64.40	63.00	62.10	60.00	59.40	62.40
1981	60.40	59.40	58.20	61.00	60.50	61.40	60.50	59.70	58.80	55.70	54.50	52.00	58.60
1982	53.50	56.30	58.60	60.10	62.60	61.10	58.80	58.10	55.60	53.80	52.60	52.50	56.70
1983[2]	54.30	57.10	59.70	61.00	59.80	58.30	54.80	54.20	52.30	51.70	51.20	54.50	55.75
1984[2]	57.10	59.70	61.40										

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.68

Average Price Received by Farmers for Calves In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1975	23.90	24.50	24.80	26.90	29.10	29.10	27.70	25.40	26.90	26.60	28.30	30.00	26.90
1976	30.80	33.80	34.80	38.20	38.80	37.70	34.90	34.20	32.90	33.00	32.10	32.80	34.50
1977	33.40	35.70	36.60	38.20	38.40	35.80	36.40	37.10	38.00	37.20	36.80	37.50	36.90
1978	41.00	44.90	50.00	53.70	59.50	58.70	60.10	61.90	65.70	66.40	67.20	72.10	59.10
1979	79.10	87.00	94.80	98.20	99.50	92.30	91.20	87.20	90.00	86.90	86.30	84.30	88.70
1980	86.90	90.90	82.60	75.50	75.40	76.90	75.40	75.60	74.30	73.90	72.10	70.30	76.80
1981	70.40	70.60	68.80	69.60	66.00	66.30	62.00	62.30	61.40	59.00	59.40	57.70	64.00
1982[2]	57.00	58.90	61.90	62.10	64.20	61.70	60.40	61.80	59.00	58.30	58.10	58.80	59.80
1983[2]	62.40	66.50	68.40	66.60	66.10	64.30	60.30	57.40	56.10	57.10	59.20	60.60	62.10
1984[2]	60.90	63.90	65.00										

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.69

Federally Inspected Slaughter of Calves & Vealers in the U.S. In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	284	250	276	284	270	276	344	345	385	443	357	381	3,894
1976	369	327	415	353	304	339	346	373	409	394	388	420	4,438
1977	408	380	457	389	353	368	352	411	403	392	398	387	4,696
1978	368	336	386	304	288	271	261	304	275	287	274	267	3,620
1979	265	212	245	201	188	162	190	216	193	225	210	192	2,499
1980	212	187	201	185	161	154	186	182	198	229	185	214	2,294
1981	215	192	213	190	159	175	204	198	228	236	217	254	2,478
1982	702			609			692			726			2,729
1983[1]	221	204	246	202	194	211	214	262	258	259	266	262	2,799
1984[1]													

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.67

Cement

U.S. production of cement (portland, masonry, and other) in 1983 was about 20 percent larger than in 1982, and production capacity utilization increased to 76 percent from 63 percent in 1982, according to a preliminary estimate by the U.S. Bureau of Mines. Six states accounted for 50 percent of the portland cement production.

Total U.S. demand for cement in 1983 was about 20 percent above the 1982 level (the lowest in 20 years), primarily in response to gains in industrial, commercial, and residential construction activity. Cement consumption increased in all sections of the country, paced by increases in the South Atlantic and West North Central regions. Cumulative U.S. domestic shipments of portland cement for the twelve months ended December 1983 were 10 percent larger than during the same months of 1982. Cumulative masonry cement shipments for 1983 were 22 percent larger than in the same months of 1982.

U.S. imports of cement and clinker in 1983 were 43 percent above imports in 1982. The principal sources of imports were Canada—50 percent; Mexico—31 percent; and Spain—18 percent.

Domestic uses for cement in 1983 were ready-mixed concrete—69 percent; concrete products, such as blocks, pipe, and prestressed precast concrete—12 percent; building material dealers—6 percent; highway contractors—4 percent; and 9 percent by other contractors, government agencies, etc.

U.S. demand for cement is expected to increase at an annual average rate of about 2 percent. The Bureau of Mines estimates 1984 domestic production of cement at 81 million tons and U.S. apparent consumption at 83 million tons.

U.S. cement prices failed to respond to improvement in production and shipment because of extreme competitive resistance within the industry, according to the Bureau of Mines.

World Production of Hydraulic Cement by Selected Countries In Millions of Short Tons

Year	Belgium	Brazil	Canada	China	France	W. Germany	India	Italy	Japan	Poland	Spain	South Africa	Un. Kingdom	United States	USSR	World Total
1979	8.5	27.4	13.0	81.5	31.8	40.4	20.1	43.3	96.8	21.1	30.8	7.6	17.8	85.9	135.6	961.3
1980	8.2	30.0	11.6	88.0	32.1	39.2	19.5	46.0	97.0	20.3	30.9	7.9	16.3	76.7	137.8	974.8
1981[1]	8.3	31.4	11.2	92.6	31.1	36.4	22.9	45.8	93.5	15.7	31.7	8.8	14.1	72.9	140.2	983.3
1982[2]	8.2	28.0	9.3	104.0	28.8	35.3	24.8	46.3	92.6	17.7	32.0	8.8	14.3	64.3	136.7	982.7
1983[2]				106.0	31.0	36.0		46.0	95.0		32.0			77.0	140.0	1,020.0

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.70

Salient Statistics of Cement in the United States

Year	Net Import Reliance as a % of Apparent Consumption	Production: Portland (Million Tons)	Production: Others[2] (Million Tons)	Production: Total (Million Tons)	Capacity Used[3] %	Shipments From Mills: Total Mil. Tons	Shipments From Mills: Value[4] $ Mil.	Average Value (F.O.B. Mill) $ per Ton	Stocks at Mills Dec. 31 (Million Tons)	Imports[5] (Million Tons)	Exports[5] (Million Tons)	Apparent Consumption (Million Tons)	Raw Materials Used in Producing Portland Cement: Cement Rock (Mil. Short Tons)	Limestone[6] (Mil. Short Tons)	Clay & Shale (Mil. Short Tons)	Total (All) (Mil. Short Tons)
1979	11	82.1	2.4	84.5	77.1	85.7	3,992	46.55	6.6	9.4	.1	87.8	31.0	81.1	11.3	136.5
1980	6	72.2	3.0	75.2	68.9	76.2	3,886	50.98	6.8	5.2	.2	77.6	25.0	78.3	10.4	126.0
1981	4	68.9	2.8	71.7	66.9	71.7	3,723	51.89	7.4	4.0	.3	73.3	26.6	73.0	9.4	120.6
1982[1]	5	61.1	2.3	63.4	58.7	64.1	3,264	50.94	6.8	2.9	.2	65.6	18.6	71.3	8.3	107.1
1983[7]	4			76.0		78.0	3,978	51.00	7.9	4.1	.2	79.0				

[1] Preliminary. [2] Masonry, natural & pozzolan (slag-line). [3] At Portland-cement mills. [4] Value received f.o.b. mill, excluding cost of containers. [5] Hydraulic cement. [6] Including oyster shells. [7] Estimate. *Source: Bureau of Mines* T.71

Index of Wholesale Price of Portland Cement Base Per Ton 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	275.5	278.9	280.5	283.3	283.3	283.8	285.5	285.5	285.5	285.5	285.5	286.3	283.3
1980	305.8	305.9	306.3	312.6	313.9	313.9	313.3	313.1	312.2	311.7	310.4	310.4	310.8
1981	324.3	324.2	324.3	332.4	332.3	330.9	331.5	331.5	331.9	330.2	330.2	330.2	329.5
1982	336.3	338.2	341.4	341.1	341.8	341.8	339.5	337.9	337.1	334.5	334.8	328.9	337.9
1983	326.4	332.4	330.2	339.1	339.6	340.9	340.5	346.3	347.9	348.0	341.2	340.5	339.4
1984	329.5												

Source: Bureau of Labor Statistics (1322-0131.99) T.74

Shipments of Finished Portland Cement from Mills in the United States In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1979	16.6	18.7	32.4	35.8	44.6	48.2	45.3	50.3	43.1	49.6	38.1	29.2	451.4
1980	22.0	22.1	26.0	33.0	36.3	39.3	39.8	39.6	40.5	43.3	31.8	28.2	404.6
1981	20.7	20.8	30.2	35.2	34.2	38.1	38.9	37.5	37.3	36.3	29.6	23.5	382.7
1982	15.1	17.8	25.7	28.2	31.0	35.4	34.5	36.0	35.4	34.1	27.4	22.7	343.5
1983	18.9	17.7	25.4	28.4	33.6	39.4	37.3	41.9	39.5	39.1	32.8	22.2	376.2

[1] Does not necessarily agree with monthly figures. These are compiled from producers' annual reports and are final. *Source: Bureau of Mines* T.73

Cheese

The growth in world cheese production slowed to 2 percent in 1983 compared with over 4 percent in 1982, according to the USDA. Total world cheese production during 1983 was estimated at 9.0 million tons compared with 8.8 million in 1982. The largest cheese-producing region was the EC, which accounted for 3.6 million tons, or 40 percent, of 1983 world production. The single major cheese-producing nation in 1983 was the U.S., which produced 2.2 million tons. The next-largest cheese producer was the Soviet Union, which accounted for 750,000 tons of 1983 world cheese production. The slowed growth of world cheese production during 1983 was attributed to weakened export markets.

Because of a 50 cent reduction in U.S. government milk support purchase prices beginning in December 1983, the prices for dairy products fell likewise. Cheddar cheese purchase prices were reduced by 4.75 cents to 134.75 cents per pound in 40- or 60-pound blocks, and 131.75 cents in 500-pound barrels. During 1983, the average price of cheese in 40-pound blocks at Wisconsin assembly points was 138.28 cents per pound, nearly equal to its 1982 average. The average price for 40-pound blocks of Wisconsin cheese reached 140.70 cents per pound after August 1983 before dropping to 136.72 cents in December. The wholesale price index for cheese (1967=100) averaged 314.1 in 1983 vs. 313.2 in 1982.

The amount of milk used to make manufactured dairy products during the third quarter of 1983 was up about 800 million pounds (4.2 percent) over third-quarter 1982. Figured on a milk-equivalent, fat-solids basis, the production of non-American-type cheese accounted for about a tenth of this increase. The production of American-type cheese accounted for four-tenths. In the first three quarters of 1983, sales of American-type cheese were down about 9 percent, while sales of non-American-type cheese were generally strong—up 3 percent over the first three quarters of 1982.

American-type cheese stocks held by the trade as of October 1983 were 20 percent over a year earlier. During the latter part of 1983, the trade increased its holdings by 6 percent. Thus, American-type cheese stocks beginning 1984 were up 8 percent compared to a year earlier. Non-American-type cheese stocks held by the trade were nearly 30 percent larger than a year earlier, as of January 1984. Figured on a year-to-year basis, U.S. government holdings of natural American cheese fell 36 percent in the third quarter of 1983. The government's inventory as of January 1984 was 34 percent larger than a year earlier. However, these stocks did not include government-owned processed American cheese. Program commitments by the CCC during 1984 are expected to be around 742 million pounds, about the same as in 1982/83. The CCC uncommitted inventory of cheese as of January 1, 1984 was 838 million pounds, 8.5 percent above a year earlier.

U.S. cheese imports were up about 15 percent during the first three quarters of 1983, and during the first ten months of 1983, imports of quota-type cheese increased by 10 percent on a product-weight basis. In 1984, world cheese production is expected to remain at the 1983 level. Because of smaller milk supplies, the 1984 U.S. cheese production is expected to decline 6 percent. A 2 percent increase in EC production is anticipated because of an improvement in world demand.

World Cheese (Total[1]) Production In Millions of Metric Tons[3]

Year	Argentina	Australia	Canada	China	Czechoslovakia	Denmark	France	W. Germany	Italy	Netherlands	New Zealand	USSR	Sweden	Switzerland	United Kingdom	United States
1978	239	112	140	210	98	177	1,063	354	583	420	81	691	94	121	216	1,597
1979	239	132	167	215	99	189	1,117	387	601	432	90	701	96	125	234	1,686
1980	245	154	177	270	109	221	1,146	421	615	443	106	648	101	125	237	1,807
1981	236	137	177		103	241	1,163	448	610	465	84	656	108	124	241	1,940
1982[2]	233	153	170		109	244	1,190	459	630	481	111	665	114	126	243	2,059
1983[3]		155									113	708				1,846

[1] Farm & factory production. [2] Preliminary. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.75

Supply and Distribution of All Cheese in the United States In Millions of Pounds

	Supply					Distribution							
	Production										Domestic Disapp.		
Year	Whole Milk[2]	All Cheese[3]	Jan. 1 Commercial Stocks	Imports[4]	Total Supply	Exports & Shipments[5]	Jan. 1 Stocks	Dec. 31 Stocks	Amer. Cheese Removed by U.S.D.A. Programs	Total Disap.	Military	Civilian	Civilian Per Capita
1978	2,074	3,519	487	245	4,248	44	61	30	40	3,792	11	3,737	17.0
1979	2,190	3,717	457	248	4,422	47	30	3	40	3,908	24	3,837	17.2
1980	2,376	3,984	513	231	4,728	46	3	169	350	4,037	16	3,975	17.6
1981	2,642	4,278	691	248	5,169	45	169	515	563	4,240	12	4,182	18.4
1982[1]	2,750	4,540	976	270	5,677	92	515	647	643	4,721	15	4,614	20.0
1983[1]		4,774	1,064	286	6,124		647		833				
1984[1]			1,268										

[1] Preliminary. [2] Whole milk American cheddar. [3] All types of cheese except cottage, pot and baker's cheese. [4] Imports for consumption. [5] Commercial. *Source: Department of Agriculture* T.76

Cheese Production in the United States In Millions of Pounds

Year	American Whole Milk	American Part Skim	American Total	Swiss, Including Block	Brick & Munster	Limburger	Neufchatel	Cream Cheese	Italian Varieties	Blue mold	All Other Varieties	Total of All Cheese[2]	Cottage Cheese Low-Fat	Cottage Cheese Curd[4]	Cottage Cheese Creamed[5]
1974	1,859	3.7	1,862	175.3	72.2	2.4	3.6	146.7	606.1	28.3	40.5	2,937	121.9	689.7	856
1975	1,655	5.4	1,660	173.8	71.7	1.9	5.0	155.3	671.9	28.5	43.5	2,811	129.3	701.0	862
1976	2,049	5.0	2,054	196.3	74.5	1.9	3.6	164.4	747.4	33.9	44.4	3,320	135.4	711.1	875
1977	2,043	4.1	2,047	189.3	71.3	1.7	3.3	173.1	793.5	34.8	44.4	3,359	139.0	684.5	878
1978	2,074	4.9	2,079	209.4	76.2	1.6	3.9	194.3	875.7	35.3	44.2	3,520	153.1	688.4	871
1979	2,190	4.4	2,194	213.3	78.0	1.6	5.2	207.1	929.1	34.6	54.1	3,717	150.4	668.5	840
1980	2,376	5.4	2,381	218.9	85.4	1.6	4.3	224.3	982.7	33.0	52.9	3,984	179.8	667.4	825
1981	2,642	5.9	2,664	214.4	81.2	1.2	241.3		994.4	30.2	66.6	4,278	208.3	647.5	773
1982[1]	2,750	6.9	2,757	221.1	85.9	1.5	262.8		1,087.8	31.0	92.4	4,540	217.6	628.9	749
1983[3]			2,917	1,857.1								4,774	217.8		746

[1] Preliminary. [2] Excludes full-skim cheddar and cottage cheese. [3] Estimated. [4] Includes cottage, pot, and baker's cheese with a butterfat content of less than 4%. [5] Includes cheese with a butterfat content of 4 to 19%. *Source: Agricultural Marketing Service, U.S.D.A.* T.77

Wholesale Price of American Cheese, Fresh Single Daisies at Chicago In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	104.8	103.9	105.9	104.8	97.9	89.2	88.8	89.8	94.5	96.5	96.2	94.6	97.3
1975	93.6	94.6	95.2	96.8	98.7	100.6	103.0	106.4	111.9	116.4	116.9	119.2	104.4
1976	118.2	108.2	113.8	116.6	114.6	115.3	120.0	125.8	118.3	114.2	114.0	114.0	116.1
1977	114.0	114.0	115.2	119.3	119.3	119.4	119.4	119.4	120.5	120.6	121.1	122.4	118.7
1978	122.9	124.1	124.6	125.9	125.9	125.9	126.0	132.1	134.0	139.4	140.0	141.0	130.1
1979	141.0	135.0	135.6	137.4	137.6	138.9	140.9	145.8	148.8	146.6	144.7	144.4	141.4
1980	146.7	147.2	150.8	153.5	154.2	154.8	155.5	157.0	161.5	165.3	164.1	164.1	156.2
1981	164.0	164.0	166.9	167.0	167.8	167.9	167.8	167.8	167.8	168.5	169.2	168.4	167.2
1982	168.4	168.4	168.4	168.4	168.4	168.4	168.4	168.3	168.3	168.6	168.6	168.6	168.5
1983	168.0	166.6	166.6	166.6	167.5	168.4	168.4	168.4	169.1	169.9	169.9	168.4	168.2
1984	168.9												

Source: Statistical Reporting Service, U.S.D.A. T.79

United States Total Cheese Production[1] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	240.7	236.6	277.2	277.8	282.7	278.4	252.4	232.9	214.5	219.2	206.4	218.4	2,937
1975	214.3	204.2	240.7	244.4	271.0	275.0	249.2	226.9	214.8	220.2	208.7	242.0	2,811
1976	245.6	236.7	278.0	293.5	314.3	322.3	294.9	283.5	261.2	254.5	255.3	280.4	3,320
1977	265.6	252.5	299.7	304.7	326.1	316.0	280.2	275.7	251.7	256.9	247.8	281.6	3,359
1978	271.1	259.9	314.4	303.7	332.9	331.9	293.6	286.5	265.0	279.3	279.7	301.4	3,519
1979	292.5	272.2	323.0	318.8	340.4	343.8	318.8	309.0	290.7	308.0	289.4	308.7	3,715
1980	312.3	303.1	339.7	336.6	360.5	359.9	332.7	317.6	317.0	332.1	317.2	354.4	3,984
1981	342.8	317.8	374.1	379.5	384.2	390.9	353.0	340.6	334.4	343.4	334.1	372.7	4,228
1982	351.3	331.1	391.7	1,203			1,121			1,142			4,540
1983[2]	374.9	352.6	416.9	408.1	429.2	436.0	400.6	380.7	375.1	392.1	387.8	419.5	4,774
1984													

[1] Excludes cottage and full skim American. [2] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.* T.78

Cold Storage Holdings of All Varieties of Cheese in the U.S., on First of Month In Millions of Pounds[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1974	357.8	366.8	395.5	438.9	489.5	533.4	570.7	566.0	552.4	539.1	512.1	502.2
1975	494.0	485.9	458.5	447.5	441.0	454.8	475.1	477.6	449.7	422.2	388.3	378.5
1976	367.8	362.3	362.3	367.9	393.7	436.1	483.7	509.0	518.0	522.6	501.4	482.0
1977	478.4	485.7	471.2	485.8	510.3	557.2	583.7	592.9	592.9	553.9	502.8	479.8
1978	468.6	459.6	442.0	430.0	447.1	462.5	500.2	498.5	489.7	476.6	455.2	431.0
1979	436.4	436.6	446.2	448.6	462.2	495.3	519.9	555.3	548.5	540.6	526.9	528.2
1980	512.1	515.8	508.9	495.1	510.5	544.4	582.7	620.0	613.8	610.6	590.9	565.4
1981[1]	578.8	601.7	596.3	593.6	631.9	649.8	685.7	714.2	720.9	694.3	682.4	677.5
1982[1]	709.6	711.7	696.4	722.4	—	—	803.9	—	—	864.8	—	—
1983[1]	963.5	1,015.5	1,088.2	1,103.2	1,116.7	1,121.8	1,143.8	1,191.4	1,227.7	1,256.7	1,236.5	1,210.3
1984[1]	1,206.3	1,202.2	1,217.5									

[1] Preliminary. [2] Quantities are given in "net weight." *Source: Crop Reporting Board, U.S.D.A.* T.80

Chromite

Chromite is the only source of commercial chromium, a highly versatile industrial and strategic metal. World mine production of chromite in 1983 was less than 3 percent above that of 1982, according to a preliminary estimate by the U.S. Bureau of Mines. The U.S. produces no chromite. Net import reliance (imports − exports + adjustments for Government and industry stocks) as a percent of apparent consumption is estimated to have been 77 percent in 1983, down from 85 percent in 1982 and 90 percent in 1981. In 1983, estimated chromium contained in purchased stainless steel scrap amounted to 20 percent of chromium demand.

U.S. 1983 imports of chromite for consumption were 62 percent below 1982 imports, and consumption of chromite was 47 percent smaller than in 1982, reflecting continued weak demand in the steel industry, the major consumer of chromium. However, imports of ferrochromium for consumption were 98 percent higher in 1983 than a year earlier, apparently partly in response to demand for specialty steels. Consumption of ferrochromium in 1983 was 26 percent above that of a year earlier. The major sources of chromite imports in 1983 were the Republic of South Africa—76 percent; Madagascar—11 percent, and the Philippines—7 percent. The major suppliers of ferrochromium (mostly high-carbon ferrochromium) were the Republic of South Africa—57 percent; Zimbabwe—18 percent; Yugoslavia—12 percent; and Turkey—5 percent.

The chemical industry was estimated by the Bureau of Mines to have used 62 percent of the chromite consumed in the U.S. in 1983; the refractory industry—24 percent; and the metallurgical industry—14 percent. Consumption of chromium by end use was estimated at 20 percent by the transportation industry; construction—20 percent; machinery and equipment—18 percent; chemicals—12 percent; others—31 percent.

U.S. industry stocks of chromite at the end of December 1983 were 442,800 short tons, 19 percent below the 544,581 tons on hand at the end of 1982. While refractory and chemical stocks were lower than a year earlier, metallurgical stocks at the end of 1983 were higher than at the end of 1982.

"Minerals and Materials," a bimonthly survey of the U.S. Bureau of Mines, reported in early 1983 that Middleburg Steel and Alloys Ltd, South Africa's second largest ferroalloy producer, was setting up plasma process ferrochromium production. The company expected to double its production capacity while reducing its unit production cost by changing its submerged arc electric furnaces to plasma furnaces. The primary reason for Middleburg's optimistic outlook is its new 3CR12 alloy steel, produced only in South Africa by Middleburg's Southern Cross Steel division. (Middleburg is one of the two world steel producers vertically integrated from mine to mill.)

The South African high-iron chromite price remained at $48 to $52 per metric ton in 1983, and the price of chromium metal was unchanged at $3.75 to $4.45 per pound, according to preliminary data of the U.S. Bureau of Mines.

World Mine Production of Chromite In Thousands of Short Tons

Year	Albania	Brazil	Cuba	Finland	Greece	India	Japan	Pakistan	Philippines	Zimbabwe	Turkey	South Africa	Iran	USSR	Madagascar	World Total[1]
1975	859	191	35	365	39	551	26	11	573	650	790	2,288	190	2,290	214	9,136
1976	915	205	21	193	38	443	24	12	475	952	640	2,656	176	2,300	244	9,362
1977	970	342	22	443	46	389	20	9	593	746	560	3,372	257	2,400	182	10,415
1978	1,090	1,056	32	449	41	293	10	12	595	527	420	3,466	218	3,640	152	12,064
1979	1,120	983	31	480	50	342	13	3	613	597	410	3,634	150	3,527	141	12,170
1980	1,190	919	32	376	47	354	15	3	547	608	431	3,763	90	3,748	198	12,386
1981[2]	1,260	1,021	23	454	47	370	12	1	484	591	466	3,164	35	3,638	110	11,736
1982[1]	1,320	1,050	30	440	46	375	12	1	390	470	410	2,385	45	3,750	100	10,907
1983[1]	1,500	1,000		450		400			400	500	400	2,400		3,800		11,200

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

T.81

U.S. Salient Statistics of Chromite In Thousands of Short Tons

Year	% Net Import Reliance of Apparent Consumption	Shipments from Gov't Stockpiles	Exports	Imports (For Consumption)	Re-exports	Consumption by Primary Consumer Groups (Gross Weight): Total	Metallurgical	Refractory	Chemical	Stocks, Dec. 31: Metallurgical	Refractory	Chemical	Total Stocks	$ Per Metric Tn. South Africa[2]	Turkish[4]
1974		500	18	1,102	99	1,447	904	295	251	340	169	64	573	50	
1975	91	418	139	1,252	45	881	532	183	166	701	154	97	952	35	
1976	89	311	124	1,275	85	1,006	597	202	207	762	136	111	1,009	39	
1977	91	517	187	1,293	61	1,000	578	208	214	900	174	264	1,338	59	137
1978	91	—	23	1,013	29	1,010	534	237	239	755	185	361	1,301	56	105
1979	90	—	27	1,024	28	1,214	774	198	242	416	161	330	907	56	110
1980	91	—	6	982	44	977	577	160	240	219	134	322	675	55	110
1981	90	—	71	898	67	889	503	148	239	230	128	370	728	55	110
1982[3]	85	—	8	507	57	545	270	80	195	120	112	313	545	52	110
1983[3]	77		11	190		290	10	97	183	140	75	227	443	52	110

[1] Preliminary. [2] Cr_2O_3, 44% (Transvaal) [3] Estimate. [4] 48% Cr_2O_3 *Source: Bureau of Mines*

T.82

Coal

The U.S. Energy Information Administration (EIA) estimated that the 1983 U.S. production of coal amounted to approximately 784.9 million short tons, nearly 6 percent below total U.S. coal production in 1982. The EIA's production figure for 1983 included three types of coal: bituminous, or soft coal, lignite, and Pennsylvania anthracite.

The major consumer of coal in 1983 was electric utilities, which consumed an estimated 625.6 million tons in 1983, or about 5.4 percent more than the 593.7 tons consumed in 1982. The major U.S. consumption of coal by electric utilities was located in the East North Central area of the country including Illinois, Indiana, Michigan, Ohio, and Wisconsin, all of which used 149.8 million tons, or about 24 percent of all U.S. coal consumed during 1983. The location of the next-highest demand for coal by electric utilities in 1983 was the South Atlantic states. Stocks of coal held by electric utilities at the end of December 1983 totaled 155.6 million tons, which was 25.5 million tons, or 14.1 percent, below a year earlier.

U.S. exports of coal were adversely influenced by the unusual strength of the dollar during 1983. Total U.S. coal exports amounted to only 77.8 million tons during calendar year 1983, 26.8 percent less than the 106.3 million tons exported during 1982. Total coal exports during 1983 were principally sent to Europe (42.5 percent), Japan (23.0 percent), and Canada (22.1 percent). Exports of bituminous coal accounted for virtually all of U.S. exports during 1983.

On the other hand, U.S. imports of coal totaled 1.3 million tons during 1983 compared with only 742,424 in 1982. The major sources of coal imports into the U.S. during the year were: the Republic of South Africa, with 63 percent of total imports; Colombia, with 19 percent; and Canada, with 16 percent.

Coke is a bituminous-type coal byproduct from which certain constituents have been driven off by heat so that the remaining fixed carbon and the ash are fused together. Coke is used primarily in blast furnaces for smelting ores, especially iron ore. U.S. exports of coke in 1983 totaled only 665,490 tons compared with 993,225 tons in 1982. Canada received 71 percent of all U.S. shipments of coke during 1983. The two next-largest purchasers of U.S. coke in 1983 were Mexico and Italy, which imported 8 percent and 6 percent of all U.S. shipments.

Some trade sources, basing their projections mainly upon the expectation of continued recovery in the U.S. economy, forecast increasing demand for coal from the electric power industry during 1984. Total domestic consumption of coal during 1984 was estimated at 640 million tons, about 4 percent above the 615 million tons consumed overall during 1983.

World Production of All Coal[3] In Millions of Short Tons

Year	Australia	E. Germany	Canada	Czechoslovakia	France	W. Germany	India	Japan	China	Poland	South Africa	Un. Kingdom	United States	U.S.S.R.	Yugoslavia
1978	124	279	34	136	26	228	116	21	681	258	100	136	670	798	44
1979	139	282	33	137	23	239	118	19	698	264	114	135	781	792	46
1980	140	285	40	136	23	239	125	20	684	254	127	141	830	790	52
1981	159	294	44	137	24	241	142	20	683	219	144	138	824	776	58
1982[2]	161	294	47	138	22	247	146	19	734	250	154	134	838	791	60
1983[1]													785		

[1] Estimate. [2] Preliminary. [3] Includes anthracite, subanthracite, bituminous, subbituminous, lignite and brown coal. *Sources: Bureau of Mines; United Nations.* T.83

Bituminous Coal Production[1] in the United States In Millions of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	23.1	23.5	38.8	59.5	68.8	65.6	53.6	64.4	57.8	69.9	69.2	59.6	665.1
1979	57.5	54.5	66.4	63.5	69.1	70.3	53.3	71.2	64.2	78.1	68.0	60.3	776.3
1980	69.1	65.2	70.5	69.1	70.5	70.8	60.7	67.9	68.3	71.7	68.1	71.6	823.6
1981	65.6	70.4	77.7	35.8	37.8	61.1	73.5	78.2	81.3	84.8	76.0	76.0	818.4
1982	65.7	69.6	82.2	73.2	70.7	71.2	59.9	72.1	67.2	70.1	63.0	62.2	833.5
1983[2]	61.9	60.3	68.1	60.4	62.7	62.0	54.6	72.5	69.9	72.8	70.6	65.1	780.9
1984[2]	67.0												

[1] Includes small amount of lignite. [2] Preliminary. *Source: Bureau of Mines* T.88

Pennsylvania Anthracite Coal Production[1] In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	350	430	525	520	540	625	555	550	560	535	530	440	6,160
1979	343	285	396	406	430	411	343	435	401	493	469	423	4,835
1980	489	366	480	523	512	508	629	509	478	567	525	470	6,056
1981	305	472	548	437	271	472	566	534	417	457	550	394	5,423
1982	353	381	459	274	329	319	313	370	340	378	338	410	4,588
1983[2]	253	230	333	269	277	332	311	402	387	423	410	368	3,995
1984[2]	400												

[1] Represents production in Pennsylvania only. Production outside which is small, is included in Bituminous Production series. [2] Preliminary. *Source: Bureau of Mines* T.92

COAL

Salient Statistics of the Bituminous Coal Industry in the United States

Year	Production				Value		Number of Mines	Thous. of Men Employed	Avg. Number of Days Worked	Net Tons Per Man	Imports	Exports to:			
	Underground	By Augers	By Stripping	Total Production	Total Million $	Avg. Per Ton $						Grand Total	Canada	Europe	Asia
	(Million Net Tons)										(Thousands of Net Tons)				
1975	293	40.7	315	648	12,472	19.23	6,168	189.9	232	11.74	940	65,669	16,735	18,972	25,943
1976	295	—384—		679	13,189	19.43	6,161	202.3	232	14.46	1,203	59,406	16,497	20,026	19,271
1977	266	—425—		691	13,705	19.82	6,077	221.4	210	14.84	1,647	53,687	17,000	N.A.	N.A.
1978	242	—423—		665	14,486	21.78	6,230	242.3	166	14.68	2,953	39,825	15,239	10,449	11,344
1979	320	—456—		776	18,243	23.65	5,837	224.2	227	15.33	2,059	64,783	19,158	22,744	17,608
1980	337	—487—		824	21,580	24.52	5,598	224.9	225	16.32	1,194	89,882	17,039	40,414	25,481
1981	316	—502—		818	21,505	26.29	5,569	226.3		18.08	1,043	110,243	17,856	56,130	31,010
1982[1]	339	—495—		834	22,635	27.14	5,363	214.4		18.13	742	105,244	18,205	51,211	29,957
1983[2]				781							1,271	76,870	16,809	32,979	21,895

[1] Preliminary. [2] Estimate. *Source: Energy Information Administration* T.84

United States Production of Coal by Principal States In Millions of Short Tons

Year	Anthracite Pennsylvania	Bituminous												Total Bituminous	Total U.S.
		Alabama	Colorado	Illinois	Indiana	Kentucky	Montana	Ohio	Pennsylvania	Virginia	West Virginia	Tennessee	Wyoming		
1971	8.7	17.9	5.3	58.4	21.4	119.4		51.4	72.8	30.6	118.3	9.3		552.2	560.9
1972	7.1	20.8	5.5	65.5	25.9	121.2		51.0	75.9	34.0	123.7	11.3		595.4	602.5
1973	6.8	19.2	6.2	61.6	25.3	127.6		45.8	76.6	34.0	115.4	8.2		591.7	598.6
1974	6.6	19.8	6.9	58.2	23.7	137.2		45.4	80.5	34.3	102.5	7.5		603.4	610.0
1975	6.2	22.6	8.2	59.5	25.1	143.6	22.1	46.8	84.1	35.5	109.3	8.2	23.8	648.4	654.6
1976	6.2	21.5	9.4	58.2	25.4	144.0	26.2	46.6	85.8	40.0	108.8	9.3	30.9	678.7	684.9
1977	5.9	21.5	12.0	53.5	27.8	146.3	27.2	47.9	84.6	37.6	95.4	9.4	46.0	691.3	697.2
1978	5.0	20.6	13.8	48.6	24.2	135.7	26.6	41.2	81.5	31.9	85.3	10.0	58.3	665.1	670.2
1979	4.8	23.9	18.1	59.5	27.5	149.8	32.5	43.5	89.2	37.0	112.4	9.3	71.8	776.3	781.1
1980	6.1	26.4	18.8	62.5	30.9	150.1	29.9	39.4	87.1	41.0	121.6	9.9	94.9	823.6	829.7
1981	5.4	24.5	19.9	51.9	29.3	157.6	33.6	37.4	78.1	42.0	112.8	10.5	103.0	818.4	823.8
1982[2]	4.6	26.6	18.3	60.3	31.8	150.2	27.9	36.5	74.8	39.8	128.5	7.5	108.4	833.5	838.1
1983[1]	4.0					133.7					111.1		116.8	780.9	784.9

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines* T.85

U.S. Consumption & Stocks of Bituminous Coal & Lignite In Millions of Short Tons

Year	Stocks—Dec. 31						Consumption						
	Electric Power Utilities	Oven Coke Plants	Steel & Rolling Mills	Other Industrials	Producers & Distrib.	Total	Electric Power Utilities	Coke Plants		Steel & Rolling Mills	Other Industrials	Retail Deliveries[2]	Total
								Beehive	Ovens				
1971							326.3	1.3	81.5	5.6	68.7	11.4	494.9
1972							348.6	1.1	86.2	4.9	67.1	8.7	516.8
1973	85.9	6.9	—10.3—			103.1	387.8	1.3	92.3	6.4	60.8	8.2	556.9
1974	82.6	6.0	— 6.6—			95.2	390.3	1.3	88.4	6.2	57.8	8.8	553.0
1975	109.7	8.7	— 8.5—			126.9	404.5	1.1	82.1	2.1	59.8	7.3	557.5
1976	116.4	9.8	— 7.1—			133.3	447.0	.9	83.4	2.7	57.8	6.9	598.3
1977	130.9	12.7	—11.0—			154.7	475.7	.6	76.7	3.2	57.1	7.0	620.5
1978	126.0	8.2	— 9.0—			143.2	480.2	.5	70.6	—62.2—		7.9	621.3
1979	156.4	10.0	—11.6—		20.3	198.3	526.0	—77.0—		—67.1—		7.1	677.3
1980	178.3	9.0	—11.8—		23.9	223.0	568.3	—66.5—		—59.3—		4.9	699.1
1981	163.4	6.4	— 9.8—		23.8	203.4	595.6	—60.9—		—66.6—		5.4	728.5
1982[1]	175.1	4.6	— 9.4—		36.1	225.2	592.6	—40.9—		—63.5—		6.6	703.6
1983[3]	160.0	4.0	— 8.5—		35.0	207.5	615.0	—36.0—		—57.0—		6.0	652.0
1984													

[1] Preliminary. [2] To other consumers (Residential & Commercial). [3] Estimate. *Source: Energy Information Administration* T.86

U.S. Stocks of Bituminous Coal for All Industrial & Retail Dealers, at End of Month In Million Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	88.3	85.8	89.5	97.1	102.9	107.1	102.8	111.4	117.0	100.4	85.6	90.0
1972	92.9	93.6	97.9	103.7	110.6	114.5	109.7	112.9	114.3	118.0	119.2	116.5
1973	111.1	108.9	111.5	112.6	116.9	110.0	107.5	106.9	106.2	107.5	107.1	103.1
1974	97.8	95.8	101.6	107.2	112.9	111.9	106.2	105.5	109.2	118.7	109.2	95.2
1975	95.5	97.0	97.8	102.7	109.7	114.9	109.1	108.5	111.9	120.3	125.8	126.9
1976	119.2	119.0	123.5	128.4	136.0	140.1	129.7	123.9	129.9	133.6	135.0	133.3
1977	118.1	114.4	122.6	129.9	137.7	146.0	137.5	136.8	145.3	158.5	173.3	154.7
1978	120.2	95.0	85.3	98.3	112.4	124.7	121.3	124.3	127.4	135.3	144.8	143.2
1979	134.3	127.0	131.9	140.1	149.1	153.3	146.2	150.7	155.8	167.5	175.4	178.4
1980	175.9	173.2	173.0	181.6	190.0	195.2	183.7	186.4	190.0	197.3	199.6	199.1
1981	193.6	192.9	202.2	181.9	162.9	153.0	149.0	151.7	159.4	169.7	177.4	179.6
1982	168.4	167.7	173.6	180.8	187.2	192.7	184.2	184.4	184.0	189.0	190.6	189.1
1983[1]	184.9	184.6	185.3	187.2	190.8	190.7	174.9	168.2	167.2			
1984												

[1] Preliminary. *Source: Bureau of Mines* T.87

Average Wholesale Price of Bituminous[1] Coal (Screenings, Industrial Use) Index—1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	368.9	368.0	366.9	366.1	366.4	365.4	366.5	366.6	366.8	367.2	368.0	373.0	367.5
1977	375.2	376.5	377.9	379.0	386.0	389.5	392.1	393.3	394.2	397.7	400.0	401.4	388.6
1978	403.2	404.4	406.5	426.4	432.4	434.5	437.2	441.9	442.9	444.1	442.4	444.0	430.0
1979	443.8	444.2	445.5	447.4	451.2	452.4	452.9	454.6	452.8	454.9	455.3	458.7	451.1
1980	459.1	459.4	461.6	464.4	465.9	465.9	466.7	467.8	470.2	469.6	474.0	473.8	466.5
1981	476.0	477.9	478.3	483.4	484.4	488.2	501.9	503.2	506.8	506.0	507.6	510.2	493.7
1982	520.6	525.3	525.0	527.9	529.6	529.3	533.9	534.9	534.4	533.9	535.5	534.6	530.4
1983[2]	531.5	529.2	534.6	534.3	532.0	530.8	531.3	533.2	534.6	533.3	536.6	539.1	533.2
1984[2]	537.7												

[1] Prices are for Screenings, industrial use, f.o.b. mine. [2] Preliminary. *Source: Bureau of Labor Statistics* (0512) T.90

Statistical Trends in the Pennsylvania Anthracite Industry

Year	Production (Millions of Net Tons) Total	Production Surface	Production Underground	Value of Production Million $	Avg. Value Per Net Ton	Stocks (Dec. 31) Electric Utilities	Stocks (Dec. 31) Prod. & Distrib.	Exports to: Total	Exports to: Canada	Exports to: France	Exports to: Netherland	Exports to: South Korea	Apparent Consumption	Avg. No. of Men Working Daily (1,000)	Avg. Number of Days Worked	Avg. Tons Per Man Per Day
						(1,000 Net Tons)										
1975	6.2	5.6	.6	198.5	32.26	982		640	544	39	16		5,106	3.9	214	7.45
1976	6.2	5.6	.6	209.2	33.92	1,000		615	445	105	16		5,040	3.7	235	7.19
1977	5.9	5.2	.6	202.4	34.86	2,321		625	526	20	—		4,803	3.7	229	6.97
1978	5.0	4.4	.6	177.6	35.25	2,178		869	405				3,895	3.5	223	6.51
1979[1]	4.8	4.2	.6	197.1	41.06	3,274	559	1,233	341	162	82		3,238	3.1		8.21
1980[1]	6.1	5.5	.6	259.3	42.51	4,741	432	1,795	421	266	127		3,667	3.6		8.38
1981[1]	5.4	4.8	.6	239.1	44.28	5,537	370	2,249	361	77	22		4,084	3.1		6.94
1982[1]	4.6	4.0	.6	229.3	49.85	6,080	672	980	316	57	—	550	3,349	2.7		4.52
1983[1]	4.0					6,500	500	776	292	58	—	357	2,600			

[1] Preliminary. *Source: Energy Information Administration* T.91

Average Wholesale Price of Anthracite Coal (Chestnut—F.O.B. Mine) Index—1967 = 100[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	46.550	46.550	46.550	46.550	46.550	46.650	46.650	46.579	46.579	46.579	46.579	46.579	46.579
1978	46.579	46.579	46.579	46.579	—	47.192	47.192	47.498	47.542	47.537	47.530	47.675	47.135
1979[1]	46.677	47.677	47.677	407.3[1]	407.6	407.6	407.6	409.7	413.8	413.8	418.6	423.7	411.0
1980	435.7	435.7	435.7	459.7	459.7	459.7	462.1	469.8	478.2	479.6	491.1	497.9	463.7
1981	508.7	542.9	542.8	545.2	552.8	572.0	589.7	597.3	619.9	629.1	642.5	643.7	582.2
1982	643.7	643.7	645.5	648.1	639.0	637.5	637.5	637.4	637.4	637.4	638.0	638.0	640.3
1983[2]	636.0	635.9	634.2	625.2	603.1	605.1	613.3	610.4	610.4	610.4	611.7	612.0	617.3
1984[2]	612.2												

[1] Prior to Apr. 1979 data are in DOLLARS PER SHORT TON. [2] Preliminary. *Source: Bureau of Labor Statistics* (0511-0101.02) T.89

Cobalt

World mine production of cobalt in 1983 was about 15 percent smaller than in 1982, according to a preliminary estimate by the U.S. Bureau of Mines. Much of the reduction reflected an estimated 20 percent drop in production by Zaire, the world's largest producer of cobalt. There is no mine production of cobalt in the U.S., but a small amount (about 6 percent of estimated reported consumption) is recycled from purchased scrap.

Net imports of cobalt represented about 96 percent of apparent U.S. consumption in 1983. Total imports of cobalt were 34 percent greater than in 1982. Principal import sources in 1983 were Zaire—[illegible] percent; Zambia—14 percent; Canada—11 percent; and Belgium—7 percent.

Reported U.S. consumption of cobalt in 1983, based on monthly consumption reports, increased about 16 percent, compared with the similar figure in 1982. Consumption in all major end uses increased in 1983, with the largest percentage gain (36 percent) registered in driers. The largest end use for cobalt is in the production of superalloys for jet turbines in military and commercial aircraft. Superalloys accounted for 35 percent of reported consumption of cobalt in 1983; magnetic alloys for various electrical applications—16 percent; driers in paints or related usage—14 percent; catalysts—10 percent; cutting and wear-resistant materials—5 percent; other uses—20 percent.

Reported consumer stocks of cobalt in the U.S. at the end of December 1983 amounted to about 1.56 million pounds, up 17 percent from year-earlier stocks.

An American Society for Metals report on the quality of cobalt in the National Defense Stockpile found that cobalt purchased after 1980 met the quality requirements of current technology for the most critical defense and industrial applications. However, pre-1980 cobalt was found to be unsuitable for the most stringent applications, such as superalloys. On September 23, 1983 the General Services Administration (GSA) awarded contracts to the metals marketing arms of Zaire and Zambia for the purchase of 6.5 million pounds of cobalt for the National Defense Stockpile. Zaire was to supply 4.5 million pounds and Zambia the balance, all at $5.50 per pound, for delivery between December 23, 1983 and December 23, 1984. The acquisition would bring the Government stockpile inventory of cobalt up to 61 percent of the 85.4 million pound goal.

Trade press reports in early March, 1984 indicated a sharp rise in cobalt prices since December 1983. Afrimet Indussa, the sole supplier of Zairean cobalt in the United States, is reported to have increased its prices for cobalt from about $5.90 per pound to around $7.50 per pound in response to increased demand. Afrimet maintains a nominal list price of $12.50 per pound, but is said to generally sell at an unpublished price subject to frequent revisions, influenced by changes in merchant prices.

World Mine Production of Cobalt In Short Tons of Recovered Cobalt Content

Year	Australia	Zaire (Congo Repub.)	USSR	France (Metal)	Canada	Cuba	Philippines	Finland	W. Germany (Metal)	Japan (Metal)	Norway (Metal)	Morocco	Zambia	New Caledonia	World Total
1975	2,986	15,400	2,000	848	1,492	1,800	129	1,545	375	53	852	2,162	2,627	3,770	34,000
1976	600	12,100	2,000	799	1,495	1,800	542	1,409	276	568	635	1,030	2,398	90	23,609
1977	1,100	11,200	2,100	939	1,637	1,800	1,195	1,353	441	1,205	777	1,119	1,878	120	23,682
1978	1,283	14,660	2,150	998	1,360	1,613	1,314	1,336	386	2,055	575	1,250	4,124	170	29,568
1979	1,745	16,530	2,200	850	1,808	1,356	1,510	1,174	424	2,924	1,051	1,059	4,718	230	32,884
1980	2,177	17,090	2,370	745	1,767	1,778	1,467	1,141	440	3,160	1,405	924	4,850	200	34,143
1981[2]	2,200	17,090	2,480	493	2,293	1,890	1,099	1,140	440	2,669	1,592	870	3,765	155	33,372
1982[1]	2,400	12,460	2,590	550	1,650	1,650	550	1,100	440	2,141	1,092	770	3,580	550	27,650
1983[1]	2,000	10,000			1,600		500	1,100					3,500	300	23,400

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines* T.93

U.S. Salient Statistics of Cobalt In Thousands of Pounds of Contained Cobalt

					Consumption By End Uses												
Year	Net Import Reliance as a % of Apparent Consumption	Cobalt Pdt's Production	Consumer Stocks Dec. 31	Imports for Consumption	Steel Full Alloy	Stainless & Heat Resisting	Catalysts[4]	Super-Alloys	Tool Steel	Magnetic Alloys	Nonferrous Alloys	Drier in Paints, etc.[5]	Cutting & Wear-Resistant Mater.	Welding & Hard Facing Rods	Total	Price $ Per Pound[3]
1974		4,636	2,047	16,122	249	39	1,905	4,090	690	3,457	780	3,635	2,578	423	18,861	3.1–3.75
1975	98	2,960	1,801	6,608	207	32	421	1,494	233	2,024	669	1,964	1,276	298	12,787	3.75–4
1976	98	4,608	3,180	16,487	251	37	1,446	1,772	151	3,521	742	3,089	1,385	454	16,482	4–5.40
1977	97	4,563	3,738	17,548	354	72	1,285	3,097	231	3,466	624	2,883	1,256	376	16,577	5.20–6.40
1978	95	6,341	4,387	19,029	250	135	1,623	4,299	379	3,768	590	5,399	1,837	725	19,994	6.40–20
1979	94	4,212	3,390	19,998	227	137	1,882	5,276	413	3,266	392	1,791	2,123	444	17,402	20–25
1980	93	3,274	2,540	16,302	116	47	1,656	6,285	321	2,267	150	1,331	1,344	620	15,321	25
1981	92	3,302	1,411	15,594	141	35	1,279	4,195	170	1,687	131	1,378	1,076	488	11,680	17.26–25
1982[1]	92	2,863	1,327	12,870	114	51	789	3,319	161	1,544	145	1,114	638	446	9,468	12.5–17.26
1983[2]	96		1,557	17,221	82	53	1,058	3,709	198	1,699	96	1,501	546	410	10,641	12.5

[1] Preliminary. [2] Estimate. [3] 97 to 99% cobalt, per contract. [4] Prior to 1976 are for chemical & ceramics. [5] Prior to 1979 are for salts & driers. *Source: Bureau of Mines* T.94

Cocoa

World cocoa bean production for the October–September 1983/84 season was forecast by the USDA in March 1984 at 1.58 million metric tons, 3.4 percent larger than a year earlier, but less than consumption requirements for the second consecutive year. Accordingly, world cocoa stocks at the end of the 1983/84 season were expected to be reduced to the lowest level since the end of the 1979/80 season.

Weather conditions in West Africa for the 1983/84 crops were again unfavorable, with rains failing during the late development stages of the main crops. Nevertheless, the Harmattan (dry winds from the Sahara) was rather mild during the past winter, following severe drought conditions and widespread brushfires of a year earlier. Production in the Ivory Coast, the world's largest producer of cocoa, was expected to total around 395,000 tonnes, 11 percent larger than a year earlier but below the record 1981/82 production of 456,000 tonnes. Rains during May and June 1983 resulted in above-average pod setting and helped main crop development, but since July 1983 most areas experienced near-drought conditions. Quality of the Ivory Coast main crop was a major concern, as the dry weather reduced bean size, and it was anticipated that local processing of the crop into cocoa products for export would increase due to the bean quality situation.

Ivory Coast exports of cocoa beans during the September–October 1982/83 season totaled 295,003 tonnes, sharply below the previous season's exports. The U.S. was the major destination of Ivory Coast cocoa bean exports in 1982/83, accounting for 95,353 tonnes, followed by the Netherlands with 91,602 tonnes, and the USSR with 24,302 tonnes.

Brazil is the world's second largest producer of cocoa beans and its 1983/84 season production was forecast in March 1984 at 350,000 tonnes, up about 3 percent from output in the preceding season. The 1983/84 Bahia main crop (Oct.–Apr.) was expected to produce 2.6 million bags (156,000 tonnes) vs. 2.11 million bags (126,862 tonnes) a year earlier. However, the larger Bahia Temporao crop (Apr.–Sept.) experienced dry weather during its early flowering stages and was considered likely to approximate the 1983 production of 3.08 million bags (185,046 tonnes).

Global cocoa grindings in 1984 were forecast by the USDA in March 1984 at 1.62 million tonnes, slightly below the record 1.64 million tonne grindings in the preceding year. Higher prices and the shift by some chocolate manufacturers to more cocoa substitutes and extenders were expected to cause some loss in grindings. The U.S. cocoa grind in 1983 declined about 3 percent from the year-earlier level, to 193,610

World Cocoa Supply and Demand In Thousands of Metric Tons

Crop Year[1]	Stocks Oct. 1	Net World Crop[2]	Total Availability	Seasonal Grindings	Closing Stocks	Stock Change	Crop Year[1]	Stocks Oct. 1	Net World Crop[2]	Total Availability	Seasonal Grindings	Closing Stocks	Stock Change
1974–5	338	1,534	1,872	1,452	420	+ 82	1979–0	383	1,606	1,989	1,489	500	+117
1975–6	420	1,497	1,917	1,523	394	– 26	1980–1	500	1,646	2,146	1,589	557	+ 57
1976–7	394	1,325	1,719	1,442	277	–117	1981–2	557	1,709	2,266	1,599	667	+110
1977–8	277	1,488	1,765	1,399	366	+ 89	1982–3[3]	667	1,524	2,191	1,615	576	– 91
1978–9	366	1,476	1,842	1,459	383	+ 17	1983–4[4]	576	1,574	2,150	1,630	520	– 56

[1] Crop year season is OCT.–SEPT. [2] The Net World Crop is obtained by adjusting the Gross World Crop for one per cent loss in weight. [3] Preliminary. [4] Forecast. *Source: Gill and Duffus, Ltd.* T.95

World Production of Cocoa Beans in Principal Producing Countries In Thousands of Metric Tons

Crop Year[1]	Brazil	Colombia	Dominican Rep.	Ecuador	Equatorial Guinea[4]	Cameroon	Ghana	Ivory Coast	Mexico	Nigeria	San Tome & Principe	Trinidad & Tobago	Venezuela	Asia & Oceania	World Total
1979–0	296	34	29	95	6	124	296	379	36	175	6	2	13	82	1,646
1980–1	351	36	33	85	8	120	258	412	32	155	6	3	14	95	1,679
1981–2	315	39	43	88	8	120	225	456	42	182	5	3	15	113	1,720
1982–3[3]	339	40	40	55	9	106	178	355	43	154	3	3	14	120	1,524
1983–4[2]	350	42	41	62	9	100	155	396	40	150	5	3	15	145	1,576

[1] Crop years are for the 12 months October 1 to September 30. [2] Forecast. [3] Preliminary. [4] Includes Fernando Po & Rio Muni. *Sources: Foreign Agricultural Service; U.S.D.A.* T.96

World Absorption (Consumption) of Cocoa[2] In Thousands of Metric Tons

Year	Japan	Australia	Belgium	Brazil	Canada	Colombia	France	W. Germany	Netherlands	Spain	Italy	Switzerland	USSR	United King.	United States	World Total
1979	22	11	17	180	11	31	48	155	127	34	34	14	120	61	160	1,472
1980	25	11	23	200	12	31	48	158	133	35	34	17	130	65	142	1,511
1981	29	12	29	195	17	35	52	167	141	37	35	18	120	85	190	1,596
1982[1]	32	9	29	170	16	38	52	175	148	37	39	18	120	88	199	1,603
1983[3]	31	8	33	203	16	39	52	180	157	38	38	18	135	77	194	1,642
1984[4]	29	8	30	200	16	38	50	175	155	35	37	18	130	75	190	1,607

[1] Preliminary. [2] Figures represent the "absorption," "disappearance" or "grindings" of cocoa beans in each country—in other words, net imports of cocoa beans adjusted for changes in stock. [3] Estimate. [4] Forecast. *Source: Gill & Duffus, Ltd.* T.98

tonnes, but was slightly above 1981 grindings. However, a strong recovery occurred in the fourth quarter of 1983, with a 5 percent increase in grindings compared with a year earlier, a 17 percent gain in chocolate liquor meltings, and a 6 percent gain in cocoa butter meltings. The 1983 grind in the Netherlands and in West Germany reached record levels.

World carryover stocks of cocoa, as of September 30, 1983 were estimated at nearly a three months' supply. Stocks were expected to be reduced by about 60,000 tonnes to around 1.62 million tonnes at the end of the October–September 1983/84 season.

The International Cocoa Agreement (ICCA) is scheduled to expire on September 30, 1984, and efforts were under way to negotiate a new agreement. The current ICCA had to function without the world's largest producer—the Ivory Coast, and the world's largest consumer—the United States. At a meeting in July 1983 it was decided to leave the ICCA price range unchanged at $1.06 to $1.46 per pound, and that the Buffer Stock Manager would not be permitted to acquire any additional cocoa unless authorized to do so by ICCA directive. Buffer stock holdings in early 1984 amounted to slightly more than 100,000 tonnes.

Futures Markets

Cocoa futures are actively traded on the Coffee, Sugar & Cocoa Exchange Inc. in New York; and on the London Terminal Market.

World Exports of Cocoa Beans by Principal Producing Countries In Thousands of Metric Tons

Year	Brazil	Costa Rica	Dominican Repub.	Ecuador	Equatorial Guinea	Cameroon	Ghana	Malaysia	Ivory Coast	Papua New Guinea	Nigeria	Sao Tome & Principe	Trinidad & Tobago	Venezuela	Togo	Grand Total
1977	107.6	5.1	25.6	20.1	5.0	56.8	249.1	13.6	158.5	29.4	167.5	6.1	3.2	7.4	19.6	919
1978	134.1	5.8	27.6	16.2	5.0	61.6	207.0	17.6	244.0	27.1	185.9	6.0	3.2	6.4	22.8	1,022
1979	156.9	4.2	25.6	13.2	5.0	61.1	200.0	24.2	170.8	28.1	113.0	8.6	2.7	6.8	10.1	880
1980	123.6	2.2	23.4	14.1	6.0	80.5	218.6	30.6	305.3	28.8	133.9	7.0	2.1	7.1	12.1	1,043
1981	125.2	2.0	27.3	24.1	7.5	82.4	180.9	42.4	437.2	27.8	109.0	6.0	3.0	7.6	18.3	1,148
1982	143.5	1.9	38.2	38.0	7.5	66.4	217.1	57.7	326.3	28.2	145.3	6.0	2.3	9.5	10.0	1,142

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.100

Raw Cocoa Grindings in Selected Countries In Thousands of Metric Tons

Year	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
	France					Germany (West)					Holland				
1978	40.0	10.8	10.9	7.3	10.9	143.6	39.8	34.7	30.3	38.8	125.9	34.0	31.5	26.7	33.8
1979	43.2	11.5	11.5	8.8	11.4	142.3	37.6	34.8	30.3	39.5	127.5	35.4	29.3	29.8	33.0
1980	43.1	12.5	10.9	9.1	10.7	151.2	40.2	35.4	32.9	42.6	132.6	35.1	31.4	29.5	36.7
1981	47.0	12.6	12.0	9.6	12.9	159.4	41.7	37.6	35.4	44.7	141.0	36.0	34.3	32.7	38.0
1982	45.5	13.1	12.3	9.7	10.4	167.0	45.1	39.9	35.8	46.3	148.4	38.4	34.9	33.7	41.3
1983[1]		12.2	12.9	10.9		179.5	45.7	41.0	43.0	49.8	156.9	40.5	37.9	35.2	43.4
1984															
	Italy					United Kingdom					United States				
1975	29.1	8.4	6.4	5.9	8.5	72.5	20.2	18.1	15.4	18.8	207.8	43.7	51.7	53.2	59.3
1976	35.4	8.6	9.0	7.8	9.9	83.0	22.3	21.6	17.9	21.2	225.3	60.9	55.0	55.0	54.5
1977	26.4	5.9	6.9	5.3	8.3	75.3	22.0	20.5	16.4	16.4	183.7	56.5	46.9	40.9	39.4
1978	30.1	7.0	8.5	6.3	8.2	72.4	21.0	19.0	15.9	16.5	162.7	42.0	38.4	36.9	45.3
1979	33.6	6.3	10.0	6.9	10.4	60.6	17.7	15.9	12.3	14.7	160.3	40.5	41.4	41.4	37.0
1980	33.8	8.0	8.4	8.1	9.3	65.3	15.5	16.1	15.5	18.2	142.2	33.5	31.5	34.9	42.4
1981	35.1	8.6	8.1	5.8	12.6	85.3	21.7	21.3	19.2	23.1	190.2	48.4	46.0	48.8	47.1
1982	39.2	9.6	10.1	6.0	13.6	88.1	25.3	21.1	19.6	22.1	199.1	47.7	50.6	50.1	50.7
1983[1]		8.4	7.9	8.1		76.7	19.8	18.1	17.4	21.3	193.6	45.9	46.7	47.8	53.2
1984															

[1] Preliminary. *Source: Gill and Duffus, Ltd.* T.97

Imports of Cocoa Butter—Selected Countries In Metric Tons

Year	Argentina	Australia	Austria	Belgium	Canada	Finland	France	West Germany	Italy	Japan	Netherlands	Norway	Sweden	Switzerland	UK	USA	USSR	Yugoslavia
1977	642	1,379	2,153	10,953	4,835	1,646	13,854	19,614	716	8,860	15,846	1,647	3,628	8,184	27,335	17,730	8,655	2,590
1978	1,255	3,128	2,634	10,683	3,562	1,572	14,296	22,867	1,045	5,468	15,549	1,699	3,600	7,986	28,814	24,688	7,800	381
1979	1,845	2,962	2,356	10,805	3,495	1,871	14,704	27,423	1,263	5,254	19,140	1,720	3,728	8,306	36,879	30,839	—	1,241
1980	1,868	4,532	2,485	12,388	3,717	2,057	14,285	22,790	1,211	6,264	16,445	1,855	4,155	9,117	29,597	34,658	—	1,054
1981	1,923	4,410	3,461	11,960	4,505	2,228	14,170	29,358	1,667	10,352	11,021	1,875	4,234	10,208	19,549	43,196	—	1,965
1982	1,734	5,419	3,382	12,281	4,860	2,333	14,008	30,564	1,631	10,615	16,225	2,083	4,451	9,982	25,820	37,325		
1983		6,067					16,690	30,581			20,224	1,892			31,581	47,981		

Source: Gill & Duffus Group PLC T.97a

Imports of Cocoa Liquor—Selected Countries

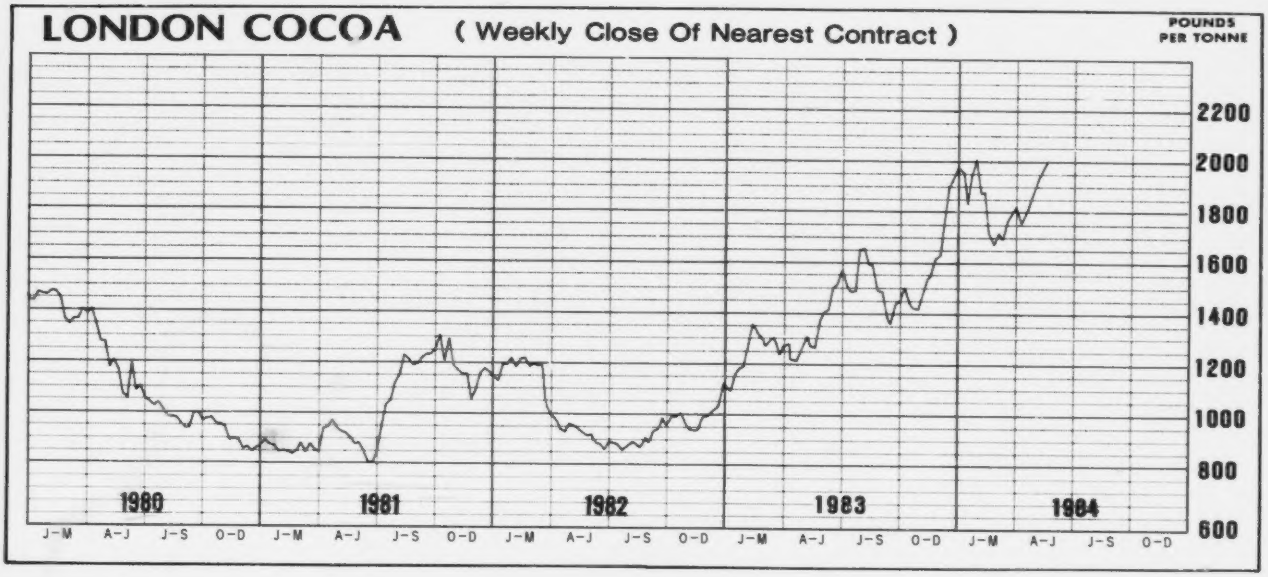
Imports of Cocoa Powder—Selected Countries

In Metric Tons

Year	France	West Germany	Nether-lands	Poland	UK	USA	USSR	Bel-gium	France	West Germany	Italy	Nether-lands	Sweden	UK	USA
1976	11,503	423	788		2,842	20,273	8,850	3,472	4,460	7,714	4,308	2,227	2,703	554	75,827
1977	12,801	551	2,669	1,024	2,738	36,401	6,850	3,106	3,143	7,459	4,104	2,656	2,572	1,052	69,351
1978	16,282	741	3,901	7,485	3,859	43,679	—	3,079	3,529	6,912	3,955	2,096	2,469	1,022	79,263
1979	15,872	795	4,136	25,755	4,784	47,828	5,000	3,642	4,368	10,846	5,266	2,970	2,656	1,747	64,080
1980	15,688	1,922	7,634	23,822	1,928	43,796	5,200	3,335	5,905	10,693	6,142	3,018	3,457	1,885	65,606
1981	15,457	2,151	9,262	26,835	1,914	33,109	16,000	3,503	7,963	12,935	6,478	3,255	3,551	2,393	77,879
1982	13,871	2,196	13,519		2,283	31,419	8,700	3,770	7,609	13,524	6,673	2,974	3,872	3,284	60,563
1983	15,164	2,288	14,216		3,829	45,477			8,527	13,886		3,009		3,014	78,968

Source: Gill & Duffus Group PLC

T.97b


LONDON COCOA (Weekly Close Of Nearest Contract)

United States Imports of Cocoa (Includes Shells) In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	19.4	20.3	27.9	20.5	16.5	12.4	16.1	14.7	7.3	15.9	18.6	20.2	209.7
1979	27.3	26.7	14.6	12.8	8.8	13.7	11.8	15.7	5.7	10.1	10.0	8.0	165.2
1980	11.1	9.2	8.0	19.5	15.4	12.0	16.9	9.6	8.2	9.6	9.4	19.9	148.5
1981	13.5	27.8	19.2	30.4	27.1	24.1	19.3	22.0	20.3	24.1	5.8	11.5	245.0
1982[1]	10.0	29.0	17.6	15.3	16.8	11.9	13.0	20.3	14.3	14.4	14.4	17.4	194.2
1983[1]	46.0	42.7	19.0	3.8	14.4	11.1	9.6	7.2	6.1	5.3	7.7	8.2	181.1

[1] Preliminary. *Source: Department of Commerce*

T.102

Bahia Crops In Thousands of Bags of 60 Kilos

Year	Total Crop Brazilian Crop Year	Temporao Brazilian Crop Year	Main-Mid March (Arrivals)	Main Crop (Oct.-Apr.)	Temporao International Crop Year	Total Crop International Crop Year
1977-78	3,989	2,102	1,769	1,887	2,524	4,411
1978-79	4,329	2,524	1,762	1,805	3,129	4,934
1979-80	5,387	3,129	2,158	2,257	2,383	4,640
1980-81	5,041	2,383	2,646	2,658	2,892	5,550
1981-82	4,609	2,892	1,680	1,718	3,170	4,888
1982-83[1]	5,284	3,170	1,961	2,114	3,084	5,198
1983-84[1]		3,084	2,517			

[1] Preliminary. *Source: Gill & Duffus Group PLC*

T.102a

COCOA

Visible Stock of Cocoa in Philadelphia Warehouses, at End of Month In Thousands of Bags

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1977	47.8	62.2	61.2	25.5	22.5	23.4	18.2	16.3	10.6	4.1	.3	.2
1978	.2	.6	6.0	14.0	.5	.8	.8	.7	14.3	12.0	23.8	50.6
1979	60.4	77.7	107.7	114.4	110.6	101.7	100.2	124.1	132.5	106.3	81.3	86.3
1980	64.6	52.5	40.0	33.4	53.3	45.3	38.8	47.3	55.8	21.6	11.8	33.6
1981	38.1	15.5	15.4	45.7	189.7	227.4	246.6	255.8	307.5	271.9	234.6	231.3
1982	190.1	163.4	174.1	163.2	154.0	125.7	104.6	64.2	51.8	64.3	69.3	98.5
1983	123.6	192.4	281.5	356.5	344.7	338.9	297.7	258.5	204.5	119.8	69.2	43.0
1984	59.5	69.9	105.4									

Source: Coffee, Sugar & Cocoa Exch., Inc. T.107

Visible Stock of Cocoa in New York Warehouses[1], at End of Month In Thousands of Bags

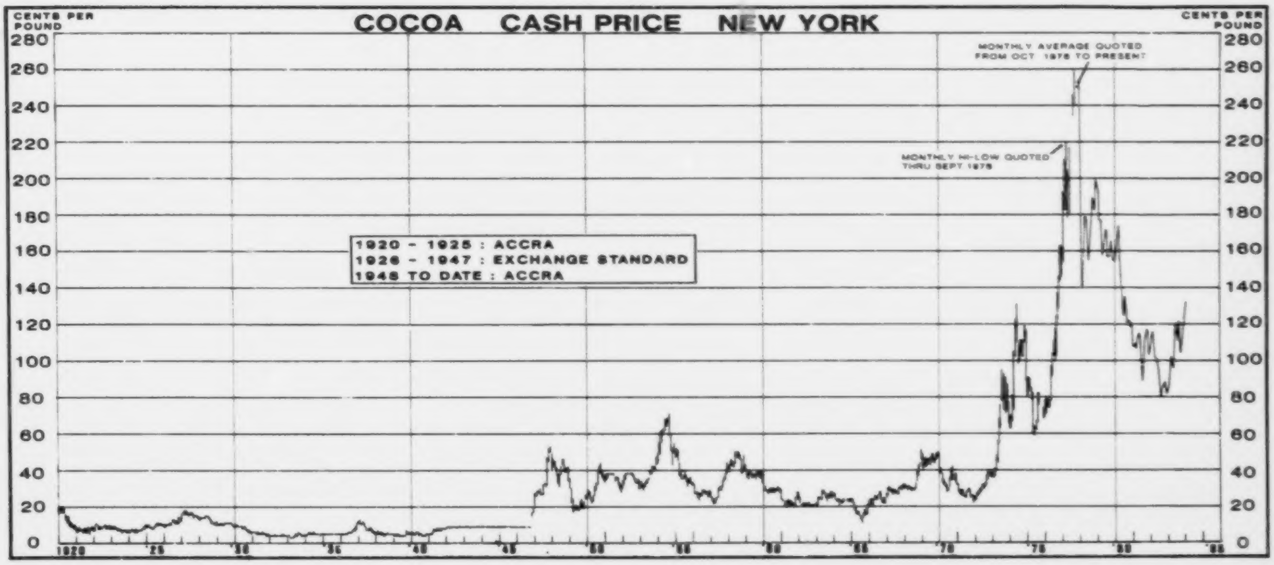
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1977	1.7	1.3	1.9	.9	.9	14.6	47.3	44.6	13.4	5.6	4.9	8.8
1978	5.0	9.3	24.2	19.4	24.2	29.1	38.0	17.9	12.2	16.0	19.8	28.2
1979	35.2	33.6	31.1	31.4	40.2	44.2	125.5	127.5	104.7	101.7	90.0	87.3
1980	85.3	68.2	18.0	29.4	42.8	84.3	94.8	78.3	71.6	52.7	69.5	22.7
1981	37.5	14.9	29.3	66.5	120.3	93.1	75.8	115.3	84.6	62.1	55.5	66.2
1982	33.4	61.3	66.7	57.3	99.0	98.6	115.8	137.7	108.8	97.1	96.1	68.9
1983	64.7	80.1	80.0	88.9	136.4	184.8	178.7	173.5	138.6	109.5	103.0	93.9
1984	59.3	53.2	52.3									

[1] In licensed & unlicensed warehouses of storage companies licensed by the Coffee, Sugar & Cocoa Exch. *Source: Coffee, Sugar & Cocoa Exch., Inc.* T.106

Spot Cocoa Bean Prices (ACCRA) in New York in Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	173.0	190.3	207.5	198.3	199.3	199.3	199.3	199.3	256.0	250.0	250.0	250.0	214.4
1978	165.0	140.0	178.0	179.0	170.0	155.0	161.0	175.0	189.0	183.0	199.0	196.0	174.2
1979	193.0	177.0	176.0	157.5	165.0	172.0	158.0	157.0	166.0	159.0	154.5	155.0	160.4
1980	163.8	173.5	157.0	147.0	135.0	125.3	134.5	120.0	122.0	119.0	120.0	108.0	135.4
1981	109.0	110.0	112.0	115.0	104.0	89.0	109.5	112.0	117.0	113.0	103.0	109.0	108.5
1982	116.0	107.0	102.0	99.0	94.0	80.0	83.0	86.0	87.0	88.0	82.0	85.0	92.4
1983	91.0	102.0	99.0	96.0	100.0	120.0	110.0	122.0	105.0	110.8	115.0	127.0	108.2
1984	132.0												

Source: Bureau of Labor Statistics (0191-0221) T.105



U.S. Spot Cocoa Prices for Selected Origins of Cocoa Beans and Products (Dollars per metric ton)

	Cocoa Beans				Chocolate Liquor		Cocoa Butter		Cocoa Cake
Crop Year	Ivory Coast	Brazil	Dominican Republic	Ecuador	Ecuador	Brazil	African	Other	10–12% Fat
1982/83									
October	1,733	1,620	1,527	1,534	1,850	1,997	3,783	3,691	502
November	1,555	1,526	1,388	1,427	1,682	1,843	3,515	3,434	480
December	1,678	1,671	1,501	1,539	1,901	2,047	3,794	3,704	538
January	1,860	1,857	1,660	1,700	2,091	2,270	4,138	4,035	595
February	2,032	2,026	1,815	1,873	2,299	2,470	4,453	4,357	651
March	1,953	1,940	1,724	1,779	2,173	2,351	4,135	4,030	721
April	1,978	1,951	1,756	1,821	2,205	2,378	4,129	4,014	831
May	2,162	2,131	1,939	2,022	2,453	2,608	4,513	4,395	961
June	2,387	2,347	2,147	2,265	2,792	2,875	4,927	4,806	1,099
July	2,382	2,348	2,150	2,269	2,821	2,876	4,877	4,744	1,207
August	2,395	2,355	2,152	2,264	2,808	2,887	4,809	4,706	1,475
September	2,253	2,213	2,022	2,141	2,643	2,682	4,452	4,372	1,402
Average	2,031	1,999	1,815	1,886	2,310	2,440	4,294	4,191	872
1983/84									
October	2,218	2,162	1,975	2,101	2,600	2,622	4,358	4,255	1,345
November	2,239	2,306	2,118	2,262	2,680	2,801	4,721	4,595	1,402
December	2,688	2,671	2,476	2,631	3,280	3,280	5,511	5,369	1,694
January	2,779	2,791	2,556	2,750	3,355	3,387	5,610	5,386	1,906
February	2,692	2,703	2,480	2,636	3,150	3,234	5,422	5,230	1,808

Source: The Cocoa Merchants Association. All prices are net ex dock or ex warehouse, U.S. Eastern seaboard North of Hatteras, for merchandise physically available in interstate commerce, in truckload quantities, regular commercial quality, and are nominal; *Foreign Agricultural Service, U.S.D.A.* T.99a

Month End Open Interest of Cocoa Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	10,427	9,210	7,530	6,609	6,807	6,045	6,516	5,557	7,039	7,732	7,691	8,064
1979	7,782	6,506	6,587	6,135	7,392	6,833	6,792	6,415	6,262	7,562	7,050	6,840
1980	8,314	7,723	6,744	6,639	8,114	6,682	8,900	9,529	13,548	14,282	13,210	11,978
1981	14,269	14,064	16,209	13,721	13,929	11,853	16,328	16,897	17,042	18,823	15,388	14,137
1982	14,554	14,421	15,129	14,036	15,563	14,083	15,954	14,678	16,439	18,615	17,600	19,988
1983	25,989	22,401	22,155	24,796	29,457	29,403	28,447	29,275	28,282	27,890	29,266	29,153
1984	29,712	26,116	26,511									

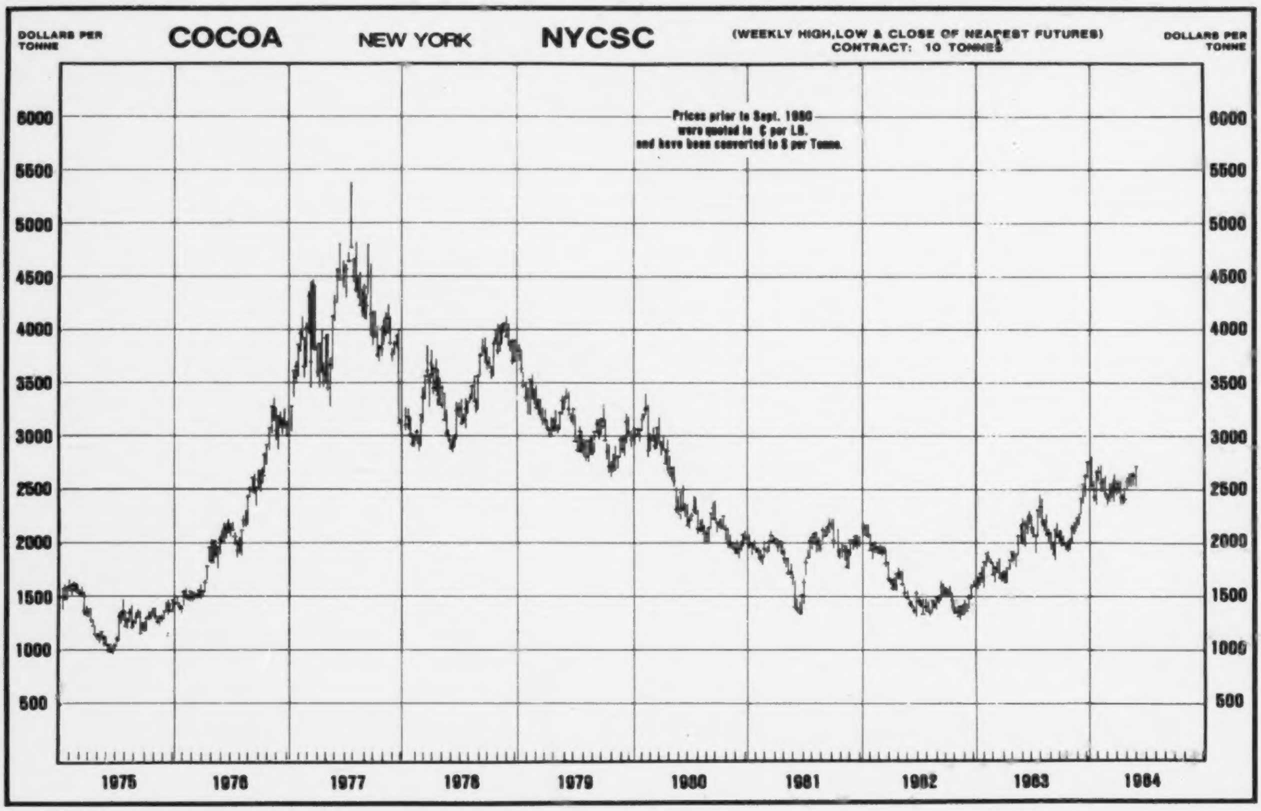
Source: Coffee, Sugar & Cocoa Exch., Inc. T.103

Volume of Trading of Cocoa Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	20,694	22,017	21,095	19,670	14,886	18,376	13,459	18,686	18,509	18,717	18,565	18,594	222,983
1979	19,447	17,626	16,430	14,784	21,063	23,282	18,160	21,125	16,929	25,555	22,321	15,099	232,183
1980	23,600	40,410	25,066	23,897	26,170	29,673	34,158	27,265	45,437	43,945	39,770	28,954	388,971
1981	32,916	43,352	37,056	52,875	32,691	54,479	55,525	53,557	43,764	63,751	53,674	39,011	562,651
1982	42,498	44,744	52,468	52,591	38,332	50,693	45,504	45,457	61,137	67,652	48,243	56,744	607,964
1983	88,429	97,636	82,115	91,851	83,275	135,536	102,212	112,031	103,023	70,032	97,781	98,619	1,162,540
1984	151,282	113,788	102,662										

Source: Coffee, Sugar & Cocoa Exch., Inc. T.104

COCOA



High, Low & Closing Prices of March Cocoa Futures at New York In Dollars per Tonne[1]

Year of Delivery		Year Prior to Delivery											Delivery Year			Life of Delivery Range
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
1978[1]	High	156.35	175.00	157.90	167.80	182.25	195.25	185.50	175.00	168.00	166.00	155.30	147.75	149.55	175.00	195.25
	Low	136.60	137.25	133.75	133.25	153.25	164.30	154.00	157.25	147.70	145.00	138.20	132.05	130.00	142.50	90.85
	Close	156.35	140.25	154.25	159.25	170.50	179.50	163.75	161.05	153.25	148.20	142.35	133.90	145.05	159.45	—
1979[1]	High	124.75	152.00	148.20	140.25	137.00	145.10	157.20	173.00	184.00	189.25	183.90	175.50	163.00	153.25	189.25
	Low	111.50	121.70	132.50	122.60	120.40	129.50	141.60	156.65	161.25	171.20	167.10	149.25	144.95	141.75	111.50
	Close	123.80	146.00	133.35	123.10	136.50	144.70	156.35	167.10	177.15	181.20	176.75	149.25	154.15	141.85	—
1980[1]	High	168.75	162.00	153.85	159.50	163.40	159.60	145.10	146.75	149.90	142.10	145.40	146.85	154.25	140.00	174.50
	Low	154.70	153.50	147.65	149.10	153.20	140.15	135.25	136.90	122.00	124.00	134.00	131.50	127.90	130.75	122.00
	Close	163.60	154.25	151.50	157.15	160.75	144.80	136.20	144.10	126.20	140.95	134.00	144.10	134.95	134.50	—
1981	High	3350	3245	3011	2830	2650	2562	2350	2454	2305	2217	2105	2084	2017	2075	3350
	Low	3085	2940	2785	2422	2385	2260	2210	2195	2121	1960	1905	1922	1795	1915	1795
	Close	3110	2960	2792	2425	2393	2275	2226	2220	2226	1965	2050	1944	1947	2025	—
1982	High	2260	2300	2250	2125	1920	2215	2290	2360	2292	2065	2085	2184	2020	1965	2360
	Low	2170	2190	2081	1890	1625	1808	2160	2196	1922	1816	1910	1942	1860	1780	1780
	Close	2224	2210	2130	1935	1720	2202	2263	2283	2005	1911	2054	1942	1924	1806	—
1983	High	2145	2105	1875	1835	1663	1640	1604	1696	1669	1495	1650	1840	1919	1816	2295
	Low	2071	1840	1738	1657	1508	1485	1451	1534	1435	1383	1447	1565	1640	1688	1383
	Close	2071	1854	1802	1660	1605	1518	1527	1604	1467	1465	1603	1826	1704	1691	—
1984	High	2015	1958	1990	2325	2390	2460	2440	2195	2124	2272	2759	2805	2626	2645	2805
	Low	1785	1790	1780	1895	2070	2055	2080	1907	1953	1967	2175	2353	2355	2425	1653
	Close	1838	1835	1990	2168	2224	2369	2113	2089	1989	2224	2755	2521	2462	2617	—
1985	High	2455	2510													
	Low	2240	2350													
	Close	2363	2489													

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[1] Prices prior to the 1981 delivery are in cents per pound. To convert to $ per tonne, multiply the ¢ per lb. by 2204.6. *Source: Coffee, Sugar & Cocoa Exch., Inc.*

T.108

Coconut Oil and Copra

The USDA, in April 1984, estimated 1983/84 world production of copra at 4.34 million metric tons, slightly below estimated 1982/83 output of 4.36 million. World copra crush in 1983/84 was estimated at 4.10 million tonnes, approximately the same as in the preceding season, and ending stocks were projected at 139 thousand tonnes versus 167 thousand at the end of the 1982/83 season. Copra is the dried meat of the coconut, from which oil is obtained. The Philippines is the world's largest producer of copra, usually accounting for around 52 percent of total production and a slightly smaller percentage of world coconut oil production.

World production of coconut oil in the 1983/84 season was estimated by the USDA at 2.55 million tonnes versus 2.54 million in 1982/83; exports at 1.19 million tonnes versus 1.21 million; consumption at 2.60 million versus 2.62 million tonnes; and 1983/84 ending stocks of coconut oil at 148 thousand tonnes compared with 212 thousand at the end of the 1982/83 season.

Effective June 1983, only 3 of the 44 coconut oil milling firms in the Philippines were to be allowed to export coconut oil. These firms represented 68 percent of the milling capacity and accounted for 84 percent of the coconut oil exported from the Philippines in 1982. The Philippine Coconut Authority stated that this marketing arrangement was necessary to ensure an orderly distribution of limited availabilities of coconut oil in 1983. The Philippines usually accounts for close to 75 percent of world coconut oil exports, but exports by that country in the first three months of 1984 were sharply below exports during the same period of 1983.

Coconut oil prices eased in March 1984 but continued at near-record premiums over soybean oil. During the past year, coconut oil prices rose more than 130 percent, partly reflecting drought-reduced output in the Philippines. However, the number of bearing trees in that country has continued to expand, and rainfall registered sharp improvement by the second quarter of 1984. This combination of factors was expected to result in a significant improvement in Philippine coconut oil production beginning in the second half of 1984.

World Copra Production by Principal Countries In Thousands of Metric Tons

Year	Naupu	Fiji	India	Indonesia	Jamaica	Malaysia	Mexico	Mozambique	Papua-New Guinea	Philippines	Solomon Isl.	Sri Lanka	Tanzania	Thailand	Ivory-Coast	New Hebrides	Vietnam	World Total
1978-9	35	22	317	1,040	28	213	130	65	159	1,823	33	166	27	50	14	49	39	4,367
1979-0	46	25	329	1,158	29	210	120	68	145	1,960	32	93	29	50	21	34	39	4,553
1980-1	42	25	324	1,284	25	208	130	70	158	2,256	32	138	29	30	24	47	39	5,002
1981-2	42	25	340	1,205	28	206	100	70	132	2,077	33	140	29	35	26	44	40	4,696
1982-3[1]	42	25	335	1,089	29	225	110	70	120	1,867	31	145	29	30	27	45	40	4,349
1983-4[2]	42	25	335	1,112	30	200	100	70	125	1,804	33	150	29	40	27	47	41	4,338

[1] Preliminary. [2] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.109

World Coconut Oil Exports by Principal Countries In Thousands of Metric Tons

Year	Sri Lanka (Ceylon)	Singapore[2]	Indonesia	Malaysia[2]	Philippines Registered	Ivory Coast	Netherlands	Mozambique	EC-10	Fiji	Papua New Guinea	Total Oceania	World Total
1978-9	32	42	2	66	795	9	31	5	165	17	28	70	1,092
1979-80	3	35	41	65	914	9	35	4	133	18	34	75	1,204
1980-1	21	63	0	65	1,047	13	41		114	15	29		1,341
1981-2	39	50	0	64	949	16	33		119	15	33		1,266
1982-3	38	30		73	944	16	35		114		22		1,232
1983-4[1]	40	24		81	915	20	20				22		1,192

[1] Preliminary. [2] Net exports. *Source: Foreign Agricultural Service, U.S.D.A.* T.110

Supply & Distribution of Coconut Oil in the United States In Millions of Pounds

	Coconut Oil							Production of Coconut Oil (Refined)				
						Domestic Disappearance						
Year Begin. Oct. 1	Production From Copra	Imports[2]	Stocks Dec. 31[3]	Total Supply	Exports & Shipments	Total	Per Capita	Total	Jan.-March	April-June	July-Sept.	Oct.-Dec.
1978-9[1]	—	967	145	1,112	8	947		768.3	187.9	207.5	196.6	176.2
1979-0[1]	—	810	157	967	30	785		595.6	183.9	137.4	143.8	129.7
1980-1[1]	—	1,122	152	1,274	38	1,032		644.7	146.1	153.4	156.0	196.1
1981-2[1]	—	960	204	1,164	28	976		700.3	193.3	175.3	171.9	159.8
1982-3[1]	—	677	160	837	19	652		665.7	162.1	162.4	168.7	172.5
1983-4[1]			175					692.6	163.1	186.0	167.1	176.4

[1] Preliminary. [2] Imports for consumption. [3] Includes G.S.A. stockpile & in U.S. bond. *Sources: Bureau of the Census; Agricultural Marketing Service* T.112

COCONUT OIL

U.S. Consumption of Coconut Oil in End Products In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	67.6	58.2	68.1	70.7	67.7	71.8	61.8	75.2	81.1	87.8	78.5	76.8	865.3
1976	80.3	78.4	88.1	83.3	84.9	90.3	80.2	82.6	80.8	79.2	87.1	75.1	990.3
1977	73.4	69.9	82.6	73.0	73.9	79.1	63.1	71.9	73.1	76.3	77.4	65.0	878.7
1978	69.3	71.0	81.5	88.9	87.6	76.1	73.6	79.0	72.4	84.0	75.4	55.4	914.2
1979	72.7	66.3	83.3	69.1	69.9	62.0	50.4	58.5	58.0	54.4	55.3	48.5	748.5
1980	55.9	49.9	59.5	55.8	58.1	56.3	56.2	51.0	62.5	66.9	63.1	58.3	693.5
1981	67.6	65.0	71.1	68.2	64.0	70.4	58.0	70.4	66.7	73.2	59.8	52.2	786.6
1982	63.3	59.6	61.7	58.5	64.7	64.2	62.2	63.9	66.1	60.2	70.5	60.6	755.5
1983[1]	62.0	64.8	61.1	64.8	80.2	74.9	70.5	61.2	64.3	68.4	66.2	61.0	799.4
1984[1]	71.5	68.6											
1985													

[1] Preliminary. *Source: Bureau of the Census* T.114

Stocks of Coconut Oil (Crude & Refined) in the United States[2] In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1976	114.1	140.6	135.4	113.6	114.1	125.3	125.6	127.3	150.3	127.4	142.4	137.9
1977	123.0	163.9	152.0	156.3	170.7	162.7	150.5	160.5	178.8	136.7	128.6	114.6
1978	133.7	146.5	176.7	173.6	166.8	140.2	146.0	132.6	130.6	144.8	123.1	120.2
1979	154.6	211.3	216.0	89.1	47.5	156.4	119.5	132.2	138.7	167.1	235.0	218.8
1980	309.7	357.7	248.4	246.5	211.2	211.9	220.6	191.6	210.1	182.6	225.6	264.6
1981	300.1	309.2	359.6	322.5	309.5	289.5	285.1	265.8	260.3	227.7	170.0	168.7
1982	173.1	153.6	186.0	160.7	153.0	170.8	194.8	184.3	166.9	159.7	144.5	144.5
1983[1]	127.2	143.8	144.7	144.0	162.9	168.9	123.6	127.7	131.8	145.3	162.5	175.6
1984[1]	175.2	215.5	187.4									
1985												

[1] Preliminary. [2] Includes coconut oil held in U.S. customs bond. *Source: Bureau of Census* T.115

Average Price of Coconut Oil (Crude)[1] at the Pacific Coast (United States) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	16.1	16.1	17.0	17.1	17.2	18.9	22.3	21.6	23.8	23.0	23.8	26.3	20.3
1977	25.6	27.4	34.7	37.3	34.3	29.9	24.8	21.8	22.9	23.9	24.9	26.4	27.8
1978	26.4	27.1	31.9	30.5	29.9	32.4	32.9	32.3	39.2	41.6	42.6	42.6	34.1
1979	46.3	47.2	47.0	49.9	53.2	57.3	57.3	53.7	44.8	42.5	42.4	40.2	48.5
1980	40.8	40.6	37.5	34.1	29.3	29.5	30.4	29.9	29.1	27.9	29.4	27.8	32.1
1981	26.3	25.0	23.9	24.3	26.0	27.4	28.1	26.4	24.3	26.6	26.6	25.4	25.9
1982	24.8	24.8	22.9	23.0	23.3	23.1	21.1	19.3	19.8	20.0	N.A.	N.A.	22.2
1983	N.A.	20.3	21.0	25.6	28.4	35.8	33.7	N.A.	N.A.	N.A.	N.A.	44.9	27.5
1984	49.2	54.3	53.0										
1985													

[1] Tank cars, f.o.b. mill. Includes 1¢ import duty. *Source: Bureau of Labor Statistics* T.116

Coffee

The third USDA estimate of the world coffee crop for the 1983/84 international coffee year (the coffee marketing year begins about October in some countries and April or July in others) was 91.7 million bags of 60 kilograms each (132.28 lbs.), of which about 70.4 million bags would be available for export. Exportable production represents total harvested production less domestic consumption in producing countries. These estimates compare with the Brazilian freeze-reduced 1982/83 world coffee production of 82.3 million bags and exportable production of 61.7 million bags.

The USDA noted that while there will be fluctuations in production from year to year mainly due to weather, world coffee production has probably leveled off. The USDA states that there are no major expansion programs underway, and those undertaken since the 1975 Brazilian frost and subsequent high prices have largely run their course.

World coffee exports in the 1983/84 season were estimated by the USDA at nearly 66.8 million bags, up 2.5 percent over 1982/83 exports. Members of the International Coffee Organization (ICO) were expected to export 56.0 to 57.5 million bags to member importing countries and 8.7 to 10.2 million to nonmember countries. There was some belief that nonmember importers would buy somewhat less than the 10.1 million bags taken in 1982/83, drawing down stocks built up over the past year or so of attractive prices. Also, tightened control measures were expected to reduce the flow of coffee presumably destined for non-member countries but winding up in member country markets. Non-ICO members are reported to have paid up to 50 percent less for coffee than members, whose prices are influenced by the $1.20–$1.40 per lb. ICO price range.

According to preliminary ICO data, disappearance of coffee in ICO member importing countries increased in calendar year 1983 to 57.055 million 60-kilogram bags from 55.801 million in 1982. World coffee demand is expected to grow slowly, at best, through the 1980's and into the 1990's, according to the USDA. Consumption growth in Western Europe, Japan and Australia appears to have leveled off. These areas accounted for much of the increased coffee demand in the 1960's and 1970's. Declining coffee consumption in the United States has offset much of the gains in other areas in recent years. U.S. green coffee imports in calendar 1983, according to Paton's *Complete Coffee Coverage* totaled around 2.89 million bags versus 2.48 million in 1982, and roastings 16.9 million bags versus 17.3 million in 1982. Almost all of U.S. coffee imports are from ICO member countries. The USDA placed calendar year 1983 U.S. imports of coffee (including products) at 1.02 million metric tons valued at $2.8 billion, $132 million less than the 1.08 million tonnes imported in 1982. Brazil and Colombia provided 22 percent and 10 percent, respectively. Mexico, El Salvador, and Indonesia together supplied 23 percent of 1983 U.S. imports.

In early 1984, coffee stocks held by producing countries were forecast to increase in crop year 1983/84 by about 4.0 million bags, from 42.85 million, equivalent to a half-year's consumption requirements. More than 90 percent of the world's coffee stocks are held by producers. Most of Brazil's projected 9.63 million bag carryover on June 30, 1984 was expected to be of relatively poor quality, according to the USDA.

The location of carryover stocks of coffee at the end of the 1983/84 season vs. (1982/83) was foreseen by the USDA as follows: North America, Central America and Caribbean—5.8 million bags (6.3 million); South America—24.2 million (19.4 million); Africa—13.7 million (13.5 million); Asia and Oceania—3.1 million (2.6 million).

Members of the ICO on September 30, 1983, set an initial global coffee export quota of 56.2 million bags for 1983/84, 2 percent above the 55.5 million bags exported to members during coffee year 1982/83. This quota did not include about 500,000 bags that may be imported from nonmember producers. The preferred price level for 1983/84 remained unchanged from 1982/83, between $1.20 and $1.40 per pound. When the 15-day moving average price exceeded $1.40 on December 19, 1983, it triggered a 1-million bag upward adjustment in export quotas to 57.2 million bags. The quota was increased another million bags to 58.2 million when the composite indicator price again exceeded $1.40 on February 7, 1984, after prices had dipped below the trigger level in January. In mid-April, the ICO 15-day indicator price was 143.90¢ per pound, having remained above the $1.40 trigger level since February 14, and a third 1.0-million bag addition to the 1983/84 export quota would occur at $1.45 per pound.

Futures Markets

Washed arabica coffee futures are traded on the Coffee, Sugar & Cocoa Exchange, Inc. in New York. Robusta coffee futures are traded in London.

World Coffee Supply and Distribution In Thousands of 60 Kilo Bags

Country by Time Period	Beginning Stocks	Production	Imports	Total Supply Distribution	Domestic Use	Exports				Ending Stocks
						Beans	RSTD/GRND	Soluble	Total	
1976/77	39,394	60,907	579	100,880	18,397	54,240	351	2,178	56,767	25,716
1977/78	25,716	70,850	593	97,159	18,775	47,759	185	893	48,827	29,547
1978/79	29,547	78,941	713	109,201	19,481	61,916	225	2,430	64,571	25,149
1979/80	25,149	81,908	727	107,784	19,977	59,008	219	2,526	61,753	26,054
1980/81	26,054	86,249	677	112,980	20,581	56,927	195	2,785	59,867	32,532
1981/82	32,532	98,195	732	131,459	21,269	60,202	183	3,973	64,358	45,832
1982/83	45,832	82,345	705	128,862	20,823	62,469	102	2,521	65,112	42,847
1983/84	42,847	91,657	673	135,177	21,560	63,993	106	2,877	66,776	46,841

Note: Total may not add because of rounding. *Source: Foreign Agricultural Service, U.S.D.A.* T.117a

COFFEE

World Green Coffee (Total) Production In Thousands of 60 Kilo Bags (132.276 Lbs. Per Bag)

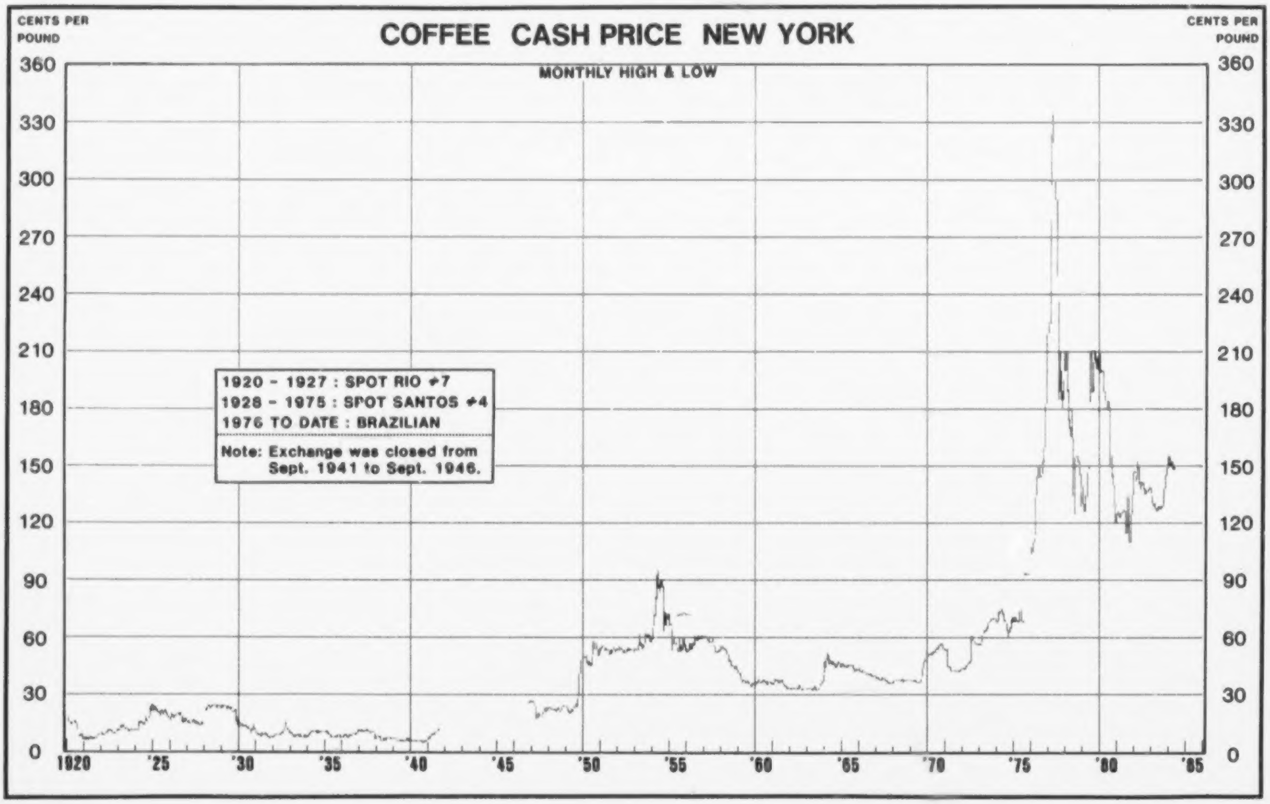
Crop Year	Angola	Brazil	Camer-oon	Colom-bia	Costa Rica	Ethi-opia	Guate-mala	India	Indon-esia	Ivory Coast	Mexico	Salva-dor	Uganda	Zaire (Congo, K)	World Total
1975–6	1,180	23,000	1,482	8,500	1,276	2,677	2,043	1,498	3,049	5,266	3,856	2,530	2,214	1,072	73,008
1976–7	1,131	9,300	1,307	9,300	1,331	2,782	2,213	1,753	3,219	4,867	3,330	2,973	2,664	1,437	61,439
1977–8	1,047	17,500	1,371	11,050	1,449	3,143	2,550	2,147	3,911	3,393	3,401	2,700	1,868	1,129	71,374
1978–9	613	20,000	1,634	12,600	1,749	3,142	2,827	1,842	4,788	4,742	4,022	3,423	1,944	1,293	79,074
1979–0	260	22,000	1,658	12,712	1,522	3,188	2,647	2,495	4,803	3,973	3,600	3,322	2,042	1,316	81,908
1980–1	586	21,500	1,959	13,500	2,140	3,264	2,702	1,977	5,265	6,090	3,862	2,940	2,133	1,526	86,249
1981–2	392	33,000	1,953	14,342	1,782	3,212	2,653	2,540	5,785	4,084	3,900	2,886	2,885	1,425	98,195
1982–3[1]	430	17,750	1,817	13,300	2,450	3,350	2,593	2,200	4,786	4,260	4,100	2,671	3,200	1,390	82,345
1983–4[1]	350	30,000	1,900	13,000	2,070	3,350	2,340	2,000	4,895	3,667	4,200	2,453	3,100	1,400	91,657

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.117

World Green Coffee (Exportable)[3] Production In Thousands of 60 Kilo Bags

Crop[2] Year	Angola	Brazil	Camer-oon	Colom-bia	Costa Rica	Ethi-opia	Guate-mala	Indon-esia	Ivory Coast	Kenya	Mexico	Salva-dor	Uganda	Zaire (Congo, K)	World Total
1975–6	1,100	15,000	1,455	7,100	1,104	1,011	1,753	2,033	5,107	1,224	2,456	2,350	2,192	922	54,307
1976–7	267	1,800	1,281	7,900	1,147	1,049	1,915	2,219	4,782	1,644	2,080	2,788	2,634	1,270	42,777
1977–8	972	10,000	1,344	9,500	1,264	1,354	2,245	2,886	3,357	1,367	2,001	2,510	1,838	954	52,571
1978–9	568	12,000	1,606	10,970	1,533	1,432	2,517	3,738	4,677	1,181	2,915	3,226	1,905	1,123	60,028
1979–0	220	14,000	1,626	10,962	1,311	1,555	2,336	3,723	3,908	1,468	2,310	3,122	2,001	1,141	62,258
1980–1	545	13,500	1,926	11,675	1,932	1,664	2,381	4,137	6,026	1,648	2,362	2,740	2,090	1,346	65,971
1981–2	350	24,500	1,918	12,492	1,539	1,596	2,328	4,630	4,019	1,434	2,450	2,686	2,840	1,240	77,256
1982–3[1]	487	9,750	1,782	11,445	2,227	1,720	2,258	3,636	4,192	1,515	2,400	2,471	3,154	1,205	61,719
1983–4[1]	306	21,500	1,665	11,140	1,837	1,700	2,000	3,795	3,597	1,475	2,450	2,253	3,053	1,183	70,391

[1] Preliminary. [2] Coffee marketing year begins in July in some countries & in others about Oct. [3] Exportable production represents total harvested production minus estimated domestic consumption. *Source: Foreign Agricultural Service, U.S.D.A.* T.118



Origin of Coffee Imports (for Consumption) into the U.S. In Thousands of 60 Kilo Bags

Year	Angola	Brazil	Colombia	Costa-Rica	Domin. Repub.	Ecuador	Ethi-opia	Guate-mata	Indon-esia	Ivory Coast	Mexico	Peru	Phil-ippines	Salva-dor	Vene-zuela	Grand Total
1970	1,385	4,717	2,497	375	352	600	1,071	716			982			539	253	19,732
1971	1,590	6,536	2,642	350	338	404	1,130	813			1,286			645	246	22,686
1972	1,297	6,152	2,711	294	401	490	965	689	744	977	1,070			391	243	20,769
1973	1,693	4,596	2,868	284	507	435	1,062	1,110	626	1,150	1,641			1,047	174	21,789
1974	2,396	2,725	3,090	268	381	512	505	1,096	942	749	1,324			1,111	246	19,245
1975	1,202	3,748	3,400	192	336	694	533	874	765	966	1,662	432		1,018	182	20,289
1976	871	3,092	2,688	179	551	767	703	749	1,082	1,330	1,869	461	44	1,045	288	19,788
1977	49	2,453	1,951	272	585	505	288	832	860	673	1,406	654	6	1,037	155	14,808
1978	304	2,694	2,808	334	461	1,044	461	942	1,177	775	1,390	954	62	627	239	18,133
1979	40	1,890	3,891	516	548	638	549	1,123	1,294	834	1,934	565	96	1,123	121	19,396
1980	120	3,505	3,404	298	343	539	406	1,374	1,315	438	1,337	573	179	1,374	35	18,153
1981	21	3,243	1,727	226	359	701	547	645	1,516	602	1,393	439	270	779	27	16,555
1982	63	3,372	1,710	248	500	773	578	844	1,118	998	1,377	513	308	919	16	17,416
1983[1]	27	3,417	1,755	226	430	857	519	887	1,079	674	1,495	439	276	1,214	26	16,449

[1] Preliminary. *Source: U.S. Department of Commerce*

T.122

Total Coffee Imports (for Consumption) into the U.S. In Thousands of 60 Kilo Bags

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	1,783	1,841	1,716	1,639	1,644	1,891	1,550	1,616	1,355	1,713	1,597	1,382	19,727
1971	2,002	1,530	1,480	2,032	1,759	1,941	2,132	2,720	2,754	621	875	1,818	21,669
1972	2,547	2,172	1,137	1,146	1,784	1,452	1,434	1,947	2,149	2,057	1,643	1,288	20,757
1973	1,996	1,844	2,101	2,050	2,494	1,710	1,573	1,731	1,399	1,624	1,624	1,652	21,799
1974	2,182	2,022	2,457	2,264	1,873	1,529	1,499	1,152	821	740	1,159	1,550	19,248
1975	1,852	1,656	1,535	1,448	1,365	1,736	1,626	1,868	2,533	1,784	1,587	1,299	20,289
1976	1,664	1,744	2,311	1,636	1,546	1,864	1,909	1,637	956	1,013	1,649	1,858	19,788
1977	1,994	1,707	1,839	1,824	1,224	1,137	756	695	678	635	972	1,347	14,808
1978	1,682	1,575	1,707	1,557	1,345	1,249	1,316	1,124	1,337	1,901	1,689	1,651	18,133
1979	1,747	1,353	1,631	2,037	1,619	1,617	1,597	1,404	1,632	1,273	1,593	1,893	19,396
1980	2,020	1,366	1,421	1,642	1,566	1,663	1,533	1,386	1,062	1,292	1,386	1,715	18,153
1981	1,858	1,738	1,395	1,299	1,356	1,026	922	1,213	1,150	1,487	1,565	1,547	16,555
1982	1,287	1,195	1,490	1,147	1,476	1,335	1,282	1,602	1,640	2,005	1,356	1,602	17,416
1983	1,556	1,332	1,373	1,253	1,502	1,034	1,319	1,230	1,532	1,685	1,380	1,253	16,449
1984													

Source: U.S. Dept. of Commerce

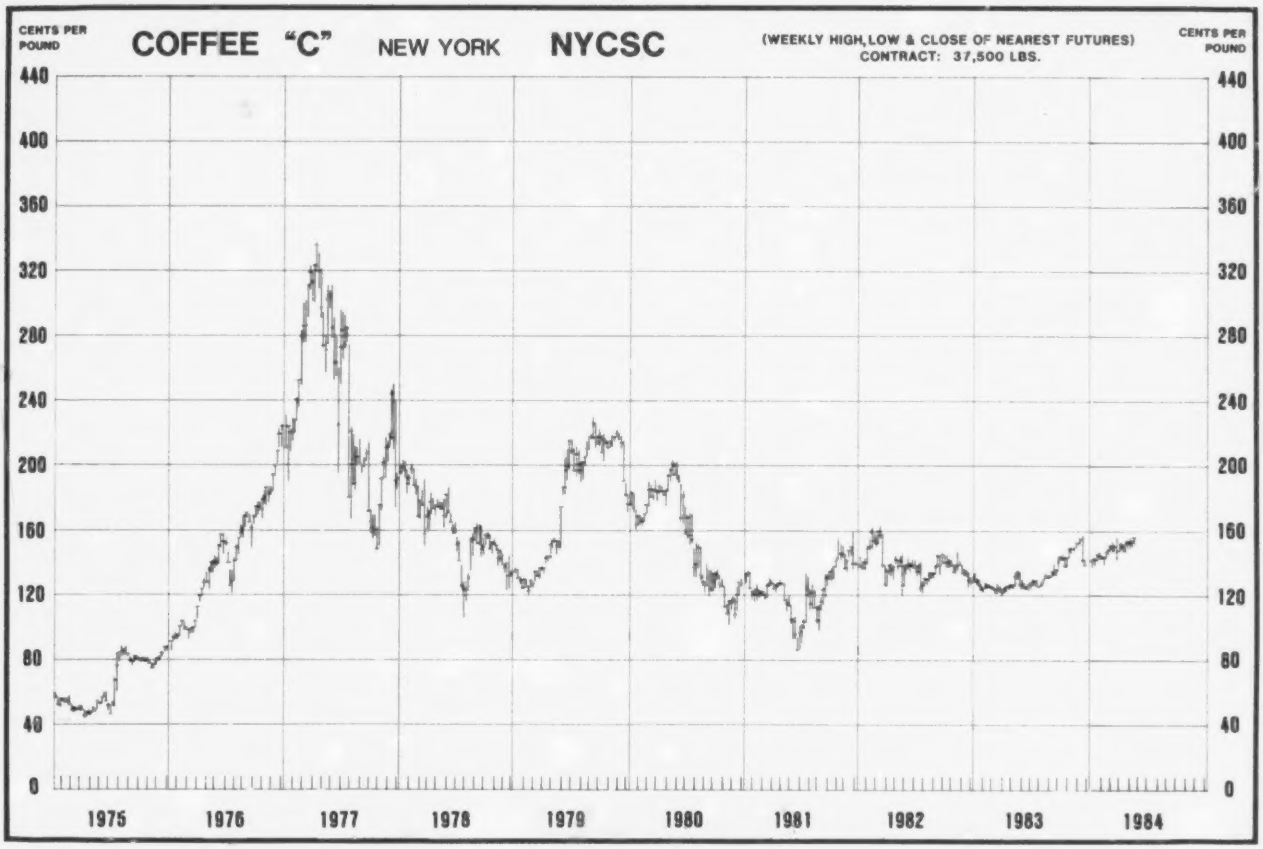
T.121

Average Spot Price of Coffee (Santos No. 4) in N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	54.8	54.8	54.3	53.8	53.8	53.8	56.8	57.0	57.8	58.8	57.5	55.0	55.7
1971	55.0	55.0	48.0	45.0	43.8	43.8	43.0	43.3	43.3	43.3	44.0	44.0	46.1
1972	N.A.	N.A.	N.A.	46.3	48.0	48.5	N.A.	62.5	59.0	48.0	56.0	57.0	54.4
1973	57.0	62.0	65.5	65.0	65.0	67.0	70.0	70.0	72.5	72.3	73.0	72.0	67.6
1974	72.0	71.0	75.0	75.5	76.5	74.0	72.0	63.0	60.0	64.0	69.0	70.0	70.2
1975	67.5	68.0	No Quotations										67.8
1976	No Quote				93.5	No Quote			152.0	No Quote			122.8
1977	No Quote												
1978	No Quote							135.0	154.0	154.0	153.0	146.0	148.4
1979	146.0	127.0	136.0	138.0	148.0	180.0	209.0	201.0	206.0	208.0	205.0	212.0	176.3
1980	189.0	213.0	205.0	208.0	218.0	211.0	195.0	206.0	206.0	210.0	210.0	208.0	206.6
1981	218.0	218.0	218.0	218.0	129.0	115.5	115.5	127.0	127.0	129.5	147.0	150.0	159.4
1982	151.0	136.0	136.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	133.0	133.0	142.0
1983	133.0	133.0	133.0	141.5	141.5	141.5	141.5	143.0	143.0	143.0	143.0	143.0	140.0
1984	143.0												

Source: Bureau of Labor Statistics (0191-0101.01)

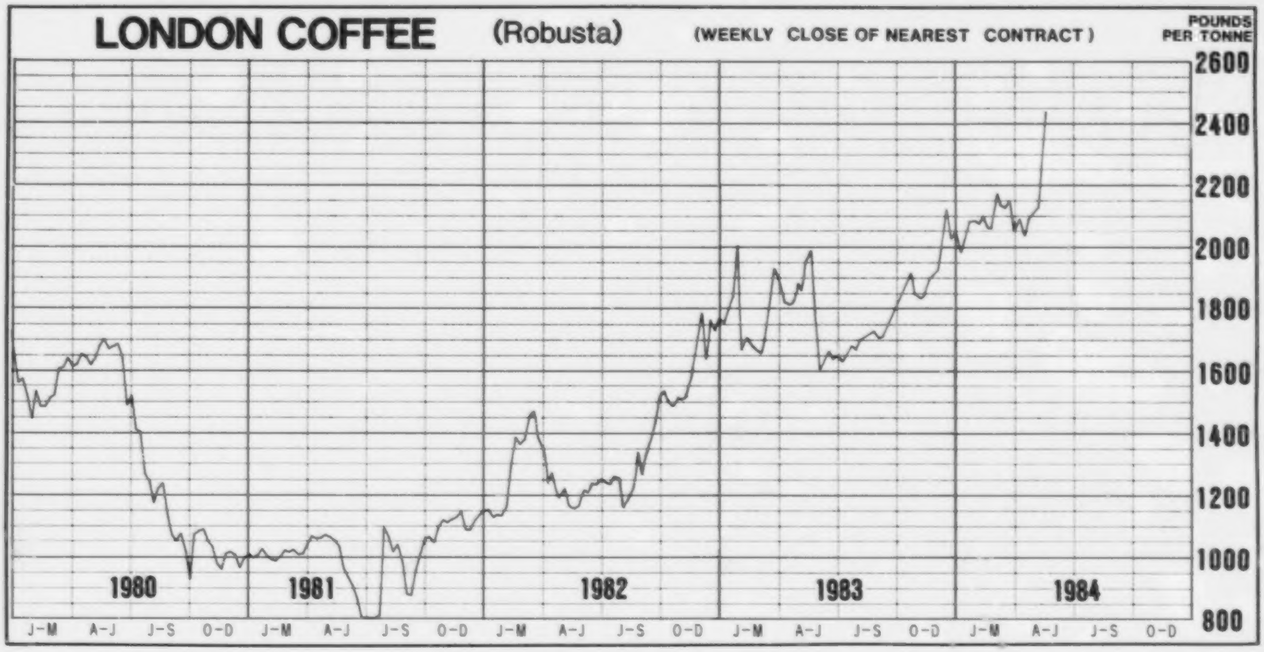
T.120



High, Low & Closing Prices of May Coffee Futures in New York In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Range
1978	High	—	314.50	294.13	255.25	201.50	185.00	171.25	150.00	161.00	175.80	190.40	179.00	173.50	183.25	179.25	314.50
	Low	—	290.75	255.90	188.00	163.00	159.00	145.50	132.00	135.00	152.00	167.00	158.80	144.50	160.25	172.00	132.00
	Close	—	292.75	261.25	194.07	179.00	164.25	147.50	147.50	158.63	174.43	170.50	159.46	168.65	174.75	179.00	—
1979	High	125.00	120.00	150.25	163.50	121.25	138.50	144.00	144.00	139.95	130.50	134.76	128.45	138.00	152.00	155.10	163.50
	Low	111.75	111.00	114.50	121.50	94.00	102.00	128.00	132.25	126.50	114.75	120.50	119.41	126.60	132.50	145.00	94.00
	Close	118.25	115.20	149.50	124.75	113.50	137.00	132.88	139.25	130.36	130.47	124.92	127.47	137.49	151.25	149.49	—
1980	High	145.00	154.86	155.00	216.49	216.35	197.00	200.00	204.75	198.00	191.50	184.00	183.50	194.75	188.00	199.00	216.49
	Low	126.49	140.50	144.05	157.00	178.29	179.25	190.35	183.50	187.00	175.00	166.91	165.50	180.75	176.50	174.75	116.00
	Close	144.99	153.50	153.00	216.49	183.90	195.09	197.25	189.31	194.08	175.96	171.00	183.26	182.25	176.60	195.25	—
1981	High	190.75	187.50	198.00	198.60	181.40	162.00	157.00	138.00	128.50	130.40	137.00	127.00	131.40	129.25	127.90	198.60
	Low	176.25	176.10	177.40	169.00	138.47	135.25	129.75	128.25	114.75	116.00	123.30	115.55	117.65	121.50	113.00	113.00
	Close	179.69	178.54	190.60	179.75	146.59	143.78	134.65	128.55	123.25	127.81	127.25	121.00	128.66	126.48	113.00	—
1982	High	126.25	124.00	123.87	111.00	126.75	120.25	123.50	130.25	138.00	133.80	137.88	147.30	149.00	143.75	144.95	149.00
	Low	120.10	117.50	111.50	80.50	81.25	98.28	96.10	123.00	124.25	122.23	128.75	137.25	124.50	129.20	135.10	80.50
	Close	122.60	122.25	112.50	87.50	121.45	98.28	123.00	129.00	126.23	133.63	137.88	141.26	128.56	141.72	138.25	—
1983	High	116.50	118.50	117.50	121.25	117.50	114.00	131.00	131.15	135.40	132.30	127.90	123.95	126.90	126.85	135.17	135.40
	Low	114.00	107.50	109.25	113.50	103.51	107.50	111.00	124.00	126.25	121.60	120.25	118.90	120.35	120.10	124.55	103.51
	Close	114.76	113.00	118.51	118.28	108.25	113.10	129.45	130.49	131.78	125.00	120.60	120.12	123.23	124.80	134.17	—
1984	High	117.00	117.75	126.00	124.50	124.00	127.25	130.05	137.30	139.90	144.10	139.65	145.00	152.30			
	Low	109.50	113.00	116.00	121.50	121.60	122.25	125.25	129.30	134.50	134.30	134.25	132.75	141.90			
	Close	115.13	116.75	123.38	122.51	122.26	125.80	129.25	135.50	138.78	135.94	137.05	144.84	151.37			
1985	High	133.50															
	Low	128.00															
	Close	132.98															

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc. T.125



Month End Open Interest of Coffee Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	4,413	4,191	3,942	3,661	3,733	2,952	3,152	3,926	4,004	4,767	5,951	6,581
1979	7,113	7,965	8,799	9,751	10,279	8,761	10,214	12,014	12,479	14,808	15,974	15,988
1980	13,077	13,113	12,990	11,288	16,975	15,854	13,576	10,767	11,824	11,155	9,489	8,848
1981	8,218	8,624	9,931	10,043	8,969	8,093	9,182	8,182	9,223	9,084	8,922	9,823
1982	11,236	9,647	9,249	8,753	7,949	8,358	7,791	8,393	9,677	8,876	9,152	9,273
1983	10,752	10,336	11,739	11,752	11,317	7,885	8,042	9,351	9,439	9,420	8,600	7,706
1984	8,086	10,963	13,012									
1985												

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc. T.124

Volume of Trading of Coffee "C" Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	11,125	10,341	17,202	12,049	12,194	11,112	11,346	18,526	13,526	14,615	14,589	17,334	163,959
1979	21,463	25,243	24,205	36,298	35,885	39,137	43,944	43,046	40,088	50,054	51,949	38,488	449,799
1980	70,277	77,143	112,558	93,108	145,830	87,149	80,217	66,054	69,731	37,528	35,310	32,029	906,944
1981	38,671	34,086	44,963	29,766	39,384	46,094	50,759	50,482	44,368	44,235	49,468	41,757	515,302
1982	47,560	50,976	63,168	52,708	51,062	44,428	42,779	38,457	44,583	39,967	46,247	37,500	556,435
1983	30,567	32,884	44,211	37,399	44,197	45,575	26,065	32,818	22,579	38,999	34,428	36,999	427,441
1984	33,327	44,890	46,793										
1985													

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc. T.123

Coke

World Production of Metallurgical Coke[1], by Specified Countries In Millions of Short Tons

Year	Belgium	Canada	Czechoslovakia	France	W. Germany	United Kingdom	India	Italy	Japan	Netherlands	Poland	China	U.S.S.R.[2]	United States	World Total
1971	7.5	5.1	11.5	13.8	41.4	21.1	9.9	7.7	42.7	2.1	15.6	24.0	86.3	57.4	377.7
1972	8.0	5.2	11.8	12.7	38.0	14.8	10.0	7.8	39.8	2.2	17.5	26.5	87.9	60.5	375.4
1973	8.6	5.9	10.1	13.1	37.5	19.6	9.8	8.5	48.9	2.9	18.7	30.9	89.7	64.3	422.8
1974	8.9	6.0	10.3	12.9	38.5	17.4	9.0	9.4	50.3	3.0	18.7	30.9	91.1	61.6	424.9
1975	6.3	5.8	10.2	12.1	38.4	17.5	7.8	8.9	49.4	3.0	19.0	30.9	92.1	57.2	417.4
1976[2]	8.6	5.8	11.9	12.0	35.2	17.4	9.9	8.8	47.9	3.1	19.8	30.9	93.0	58.3	424.9
1977[3]	6.1	5.4	9.9	11.9	30.3	15.6	11.0	8.9	47.0	2.8	21.0	30.9	94.2	53.5	411.8
1978[3]														49.0	402.0
1979[3]														52.9	375.9
1980[3]														46.1	

[1] Excluding Breeze. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines*

T.126

U.S. Salient Statistics of Coke In Thousands of Net Tons

	Production			Producers' Stocks—Jan. 1						Exports to		Value of		Value Per Ton Sold	
					Oven Coke at Plants							Coke Produced[2]	All Coal Chemical Mater.	Oven Coke	Beehive Coke
Year	Total	Oven	Beehive	Total	Merchant	Furnace	Beehive	Exports	Imports	Canada	Mexico	Mil. $		$	
1971	57,436	56,664	772	4,113	95	4,018	1	1,509	174	492.4	80.2	1,849	260	37.41	21.45
1972	60,507	59,853	654	3,510	134	3,376	1	1,232	185	488.0	105.2	2,080	295	40.70	22.04
1973	64,325	63,496	829	2,941	351	2,590	1	1,395	1,094	747.5	102.3	2,575	356	42.92	27.31
1974	61,581	60,737	845	1,184	71	1,113	—	1,278	3,540	709.7	158.0	4,609	653	65.74	44.02
1975	57,207	56,494	713	935	25	910	—	1,273	1,819	680.6	107.3	4,607	654	87.64	65.17
1976	58,333	57,728	605	5,001	278	4,718	—	1,315	1,311	754.4	87.7	5,021	920	94.35	72.48
1977[1]	53,509	53,060	449	6,491	314	6,173	—	1,241	1,829	634.9	49.4	4,653	883	103.27	78.87
1978[1]	49,009	48,593	355	3,534	136	6,308	—	693	5,722	299	37.4	5,635	923		
1979[1]	52,943			6,724	184	3,350	—	1,440	3,974	598	61.0	5,459	1,203		
1980[1]	46,132			5,185	595	4,590	—	2,071	659	812	75.0				
1981[1]	42,786			8,627	1,106	7,521	—	1,170	527						
1982[3]	28,115			6,724	403	6,324		993	120	449.7	72.0				
1983[3]	25,808			8,190	331	7,858		665	35	471.2	55.8				
1984[3]				3,518											

[1] Preliminary [2] Beehive and oven, coke & breeze. [3] Estimate. *Source: Bureau of Mines*

T.127

Oven Coke Production in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	5,647	5,054	5,752	5,621	5,693	5,268	4,816	3,455	3,976	3,961	3,220	4,200	56,664
1972	4,763	4,651	5,076	5,091	5,237	4,976	5,024	5,088	4,822	5,026	4,914	5,183	59,853
1973	5,364	4,891	5,356	5,262	5,454	5,325	5,307	5,383	5,153	5,358	5,218	5,426	63,496
1974	5,422	4,974	5,265	5,255	5,369	5,218	5,251	5,219	5,056	5,214	4,427	4,067	60,737
1975	4,924	4,750	5,324	5,030	5,052	4,765	4,532	4,427	4,250	4,527	4,365	4,549	56,494
1976	4,551	4,372	5,041	4,884	5,069	4,938	5,007	4,785	4,720	4,857	4,752	4,751	57,728
1977	4,412	4,267	4,696	4,666	4,822	4,686	4,639	4,249	4,069	4,289	4,186	4,077	53,060
1978	3,603	2,741	2,661	3,753	4,398	4,362	4,455	4,379	4,346	4,512	4,383	4,645	48,238
1979	4,469	4,031	4,679	4,419	4,585	4,352	4,414	4,440	4,366	4,466	4,252	4,453	52,943
1980	4,394	4,204	4,444	4,396	4,238	3,686	3,370	3,387	3,295	3,470	3,565	3,683	46,132
1981		11,178			9,853			11,175			10,580		42,786
1982		8,828			7,507			6,270			5,509		28,115
1983[1]		5,579			6,451			6,753					
1984													

[1] Preliminary. *Source: Bureau of Mines*

T.128

Coke (Oven-Coke) Stocks at Plants In Thousands of Short Tons

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1971	4,113	4,241	4,054	3,842	3,599	3,343	3,153	3,401	3,818	4,070	4,143	3,596
1972	3,510	3,585	3,611	3,323	3,111	3,022	2,907	3,089	3,185	3,202	3,089	3,011
1973	2,941	2,824	2,560	2,291	2,035	1,796	1,712	1,514	1,520	1,501	1,435	1,313
1974	1,184	1,125	1,139	1,163	1,183	1,238	1,243	1,146	1,197	1,321	1,298	1,064
1975	935	1,054	1,262	1,442	1,733	2,261	2,889	3,522	3,867	3,821	4,108	4,522
1976	4,996	5,092	4,994	5,105	5,062	4,992	4,729	4,641	4,445	4,750	5,179	5,800
1977	6,487	6,950	7,231	7,283	7,038	6,736	6,468	6,516	6,281	6,192	6,554	6,526
1978	6,444	5,937	5,209	3,460	3,189	2,993	2,964	2,845	2,989	3,065	3,131	3,339
1979	3,534	3,548	3,509	3,339	3,495	3,459	3,200	3,253	3,322	3,754	4,228	4,630
1980	5,185	5,531	5,781	5,832	6,063	6,698	7,426	8,133	8,676	9,018	9,011	9,040
1981	8,267	—	—	7,586	—	—	4,990	—	—	5,198	—	—
1982	6,724	—	—	7,455	—	—	7,871	—	—	7,969	—	—
1983[1]	8,190	—	—	5,781	—	—	4,569	—	—	3,875		
1984												

[1] Preliminary. *Source: Bureau of Mines*

T.131

Index of Wholesale Price[1] of Oven Foundry Coke F.O.B. at Birmingham, Ala. Base Per Ton 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	48.60	48.60	48.60	48.60	48.60	50.10	50.10	50.10	50.10	50.10	50.10	50.10	49.48
1972	50.10	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.16
1973	54.90	54.90	54.90	56.80	56.80	56.80	56.80	56.80	56.80	56.80	56.80	56.80	56.33
1974	59.95	59.95	63.75	73.50	80.50	80.50	80.50	91.00	95.50	100.50	100.50	100.50	82.22
1975	108.00	108.00	108.00	110.50	110.50	110.50	110.50	110.50	110.50	110.50	110.50	110.50	109.88
1976	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00
1977	123.00	123.00	123.00	123.00	129.00	129.00	129.00	129.00	129.00	129.00	129.00	129.00	127.00
1978	134.00	134.00	134.00	134.00	139.75	139.75	139.75	139.75	139.75	139.75	139.75	139.75	137.83
1979	144.75	144.75	144.75	N.A.	N.A.	N.A.	N.A.	144.75	144.75	146.65	146.65	145.46	145.46
1980[1]	439.6	439.6	439.6	439.6	439.6	439.6	439.6	439.6	439.6	439.6	439.6	434.0	439.1
1981	434.0	434.0	434.0	434.0	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	463.9
1982	478.9	485.2	485.2	N.A.	485.2	454.8	467.4	465.9	465.7	463.4	463.4	463.4	470.8
1983	460.5	460.5	452.7	452.7	433.6	433.6	426.8	448.9	448.9	448.1	448.5	448.5	446.9
1984	413.6	413.6											

[1] Prior to 1980, data are for the price of oven foundry coke, F.O.B. at Birmingham, Ala. in dollars per net ton. *Source: Bureau of Labor Statistics* (0522-0101.99)

T.130

U.S. Coke & Its Relationship to the Iron Industry and Coal-Chemical Production

	Consumption			Lbs. of Coke Consumed Per Net Ton of Pig Iron & Ferro-Alloys	% Yield of Coke From Coal	Lbs. of Coking Coal Consumed Per Net Ton of P. I. & F. A.	Distribution of Coke to Coal-Chemical Materials Produced								
Year	Apparent Consumption	In Iron Furnaces	All Other				Blast Furnace Plants	Foundries	Producer & Water Gas Plants	Other Industrial Plants	Light-Oil Deriv. Mill. Gal.	Ammonium Sulfate[2] Mill. Lbs.	Crude Coal Tar	Crude Light Oil	Coke-oven Gas Billion cu. ft.
	1,000 Net Tons						In Millions of Net Tons						Mill. Gal.		
1971	56,689	51,498	5,191	1,261	69.0	1,827	54.0	3.3	—1.6—		95	1,154	679	202	862
1972	60,046	54,607	5,439	1,222	69.0	1,768	56.0	3.4	—1.6—		104	1,208	747	214	916
1973	65,765	60,720	5,045	1,200	68.4	1,754	61.2	3.7	—1.4—		114	1,250	732	226	995
1974	64,092	58,441	5,651	1,219	68.4	1,783	57.2	3.4	—1.2—		95	1,200	677	217	967
1975	53,687	48,817	4,870	1,222	68.4	1,786	49.6	2.6	— .9—			1,022	646	195	895
1976	56,834	51,561	5,273	1,187	68.9	1,723	52.5	3.0	—1.2—			1,044	636	198	
1977[1]	54,144	48,510	5,634	1,193	68.9	1,731	48.8	3.3	—1.5—				592	178	
1978[1]	56,984	51,286	5,662	1,439	68.6	1,667	48.1	2.6	—1.1—				541	162	
1979[1]	53,826	50,008	3,818	1,150	68.4	1,681	48.0	2.5	—1.4—				591	175	
1980[1]	41,278												534	159	
1981[1]	44,046														
1982[1]	25,776														
1983[1]	29,850														

[1] Preliminary. [2] Or equivalent. *Source: Bureau of Mines*

T.129

Copper

World mine production of copper in 1983 was about one percent below that of 1982, according to preliminary U.S. Bureau of Mines data. U.S. mine production dropped about 8 percent because of depressed copper and byproduct prices, and because of labor strikes at some mines. However, mine production outside the U.S. generally continued around or slightly above 1982 levels.

U.S. primary refinery production of copper in 1983 was 4 percent below the 1982 level and smelter production was off 5 percent. Production of refined copper by secondary refineries in 1983 was 8 percent lower than a year earlier, but brass mill product output was up 22 percent. Refined production from scrap was off 8 percent.

Imports of refined copper into the U.S. in 1983 soared 78 percent, to 459,567 metric tons, while the copper content of ore and concentrate imports dropped 23 percent, to 90,584 tonnes. Imports of blister and refined copper from Chile accounted for around 50 percent of U.S. copper imports in 1983. U.S. exports of ores and concentrates (copper content) dropped 75 percent, to 50,192 tonnes in 1983 and exports of refined copper, at 81,398 tonnes, were less than 3 percent larger than in 1982.

U.S. consumption of refined copper in 1983 totaled about 1.78 million metric tons, 7.5 percent more than in 1982. Consumption by wire rod mills was only about one percent larger, at 1.24 million tonnes. Brass mill consumption rose 27 percent, to 500 thousand tonnes, while consumption by secondary copper smelters declined 41 percent, to about 26 thousand tonnes. A shortage of concentrates for domestic smelters was evident at yearend 1983, as competition in international concentrate markets increased and some producers sold concentrates outside the U.S.

About one-half of annual world copper mine production is used in electrical conductor appliances and the rest is used for heat exchanges, plumbing tube, valves and fittings, machine parts, small arms cartridges, coinage, bearings, and other uses. U.S. copper consumption in 1983, by industrial sector was estimated to be as follows: building construction—32 percent; electrical and electronic products—26 percent; industrial machinery and equipment—19 percent; transportation—10 percent; and consumer and general products—13 percent.

At the end of 1983, U.S. industry stocks of refined copper were one percent below the year-earlier level, at 693 thousand tonnes; blister and other stocks were off 26 percent, to 174,000 tonnes; and stocks of purchased copper-base scrap were reduced by 7 percent in 1983, to 117 thousand tonnes. As of November 30, 1983 the U.S. stockpile held only 20,000 tonnes of copper vs. a goal of 907 thousand tonnes.

Other materials may be substituted for copper in some applications, but aluminum is copper's only practical competitor as an electrical conductor presently. Most overhead high-voltage power cable is now aluminum, and it is also widely used in the place of copper for busbars and switchgear, for transformer windings, for rotors in small electric motors, and for some auto battery cables.

Copper prices rallied early in 1983, influenced by generally optimistic speculation with regard to improving demand for copper from the housing and auto industries. The monthly average U.S. producers' prices for cathodes and wirebars peaked in May at 82.929 and 85.634 cents per pound, respectively; and the London Metal Exchange cash price for high-grade (includes both cathode and wirebars) peaked at 80.073 cents per pound in the same month. Later, the market was adversely affected by lower-than-anticipated demand for physical metal and growing world stocks, which approached the record-high levels reached in 1976 and 1977. The monthly average low for the U.S. producers' prices for cathodes and wirebars occurred in November, at 66.751 and 69.581 cents, respectively; and the LME high-grade price dropped to a low of 62.988 cents per pound.

Futures Markets

Copper futures are traded on the Commodity Exchange, Inc. (COMEX) in New York, and on the London Metal Exchange (LME).

World Mine Production of Copper (Content of Ore) In Thousands of Metric[5] Tons

Year	Australia	Canada[3]	Chile	China	Finland	Japan	Mexico	Peru	Zambia	Poland	Zaire	South Africa	Philippines	United States[3]	USSR[4]	World Total[1]
1971	195.4	721.4	790.7		31.3	133.4	69.6	228.6	718.0		447.3	175.6	217.8	1,522		6,689
1972	205.9	793.3	800.0		32.1	123.6	86.8	248.0	791.1		472.0	178.5	235.6	1,665	733	7,329
1973	242.8	908.2	810.6		41.2	124.0	88.7	223.4	778.9	170.9	538.6	193.8	243.8	1,718	772	7,845
1974	277.1	905.4	994.4	110	39.9	90.5	91.1	233.2	769.4	218.3	550.5	197.4	249.1	1,597	816	8,063
1975	241.4	808.9	913.0	110	42.8	93.7	86.2	197.3	746.2	260.0	547.1	197.2	249.4	1,413	843	7,679
1976[5]	218.5	730.9	1,005	180	41.7	81.6	89.0	220.3	708.9	267.0	444.4	196.9	237.6	1,457	800	7,525
1977	221.6	759.4	1,056	195	46.7	81.4	89.7	338.1	656.0	289.3	481.6	208.3	272.8	1,364	830	7,739
1978	222.1	659.4	1,034	200	46.9	72.0	87.2	366.4	643.0	321.0	423.8	205.7	263.6	1,358	865	7,604
1979	237.6	636.4	1,063	200	41.1	59.1	107.1	390.7	588.3	325.0	400.0	190.6	298.3	1,444	885	7,675
1980	243.5	716.4	1,068	200	36.9	52.5	175.4	366.8	595.8	346.1	459.4	200.7	304.5	1,181	900	7,663
1981	225.9	691.3	1,081	200	38.5	51.5	230.5	342.1	588.0	315.2	505.0	208.7	302.3	1,538	950	8,175
1982[2]	247.0	606.2	1,241	200	38.5	51.0	239.1	369.4	584.0	348.0	503.0	188.7	293.0	1,140	970	8,040
1983[1]	250	600	1,250					330	580	350	490		320	1,050	1,000	7,960

[1] Estimate. [2] Preliminary. [3] Recoverable. [4] Smelter Production. [5] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

T.132

U.S. Salient Statistics of Copper In Thousands of Metric[9] Tons

Year	New Copper Produced — From Domestic Ores — Mines	New Copper Produced — From Domestic Ores — Smelters	New Copper Produced — From Domestic Ores — Refineries	New Copper Produced — From Foreign Ores[2]	Total New	Secondary Recovered[7]	Imports[3] — Unmanufactured	Imports[3] — Refined	Exports — Ore, Concentrate[4]	Exports — Refined[5]	Stocks—Dec. 31 — N.Y. Commodity Exch.	Stocks—Dec. 31 — Primary Producers (Refined)	Stocks—Dec. 31 — Blister & Materials in Solution	Appar. Consumption[6] — Primary Copper	Appar. Consumption[6] — Primary & Old Copper[8]
1971	1,522	1,471	1,411	181	1,592	445	359	164	263	188		75	303	1,623	2,068
1972	1,665	1,649	1,680	193	1,873	458	416	192	242	183		57	281	1,901	2,359
1973	1,718	1,705	1,698	170	1,868	486	421	203	293	189		37	265	1,902	2,388
1974	1,597	1,532	1,421	234	1,655	483	609	314	246	127		101	324	1,778	2,261
1975[9]	1,282	1,247	1,167	143	1,309	335	294	133	305	156	91	187	283	1,191	1,526
1976	1,457	1,326	1,291	106	1,396	380	485	346	218	102	182	172	291	1,656	2,036
1977	1,364	1,265	1,280	77	1,357	410	396	351	91	47	167	212	314	1,622	2,032
1978	1,358	1,270	1,327	122	1,449	502	532	403	187	92	163	153	263	1,819	2,321
1979	1,444	1,313	1,412	104	1,516	604	282	204	231	74	90	64	275	1,735	2,339
1980	1,181	994	1,122	89	1,211	613	547	427	107	14	163	49	272	1,638	2,251
1981	1,538	1,295	1,430	114	1,544	598	430	331	151	24	170	151	277	1,748	2,346
1982[1]	1,140	941	1,065	162	1,227	518	506	258	195	31	248	270	234	1,324	1,854
1983[1]	1,045	888	1,004	179	1,182	460	643	460	50	81	371	154	174	1,688	2,000

[1] Preliminary. [2] Also from matte, etc., refinery reports. [3] For consumption. [4] Blister (copper content)." [5] Ingots, bars, etc. [6] Withdrawals from total supply on domestic account. [7] From old scrap only. [8] Old scrap only. [9] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

T.133

Consumption of Refined Copper[2] in the United States In Thousands of Metric[4] Tons

Year	By-Products — Cathodes	By-Products — Wire Bars	By-Products — Ingot & Ingot Bars	By-Products — Cakes & Slabs	By-Products — Billets	By-Products — Other	By Class of Consumer — Wire Mills	By Class of Consumer — Brass Mills	By Class of Consumer — Chemical Plants	By Class of Consumer — Secondary Smelters	By Class of Consumer — Foundries	By Class of Consumer — Miscellaneous	Total Consumption
1970	247.0	1,275.8	145.7	157.1	202.0	15.7	1,338.7	660.6	2.2	7.0	34.7		2,043.3
1971	309.4	1,236.9	118.3	154.8	182.3	17.7	1,324.9	655.8	1.5	6.9	30.4		2,019.5
1972	425.3	1,331.9	141.4	160.5	161.4	18.2	1,526.3	667.2	.9	10.0	34.5		2,238.9
1973	531.2	1,356.0	147.8	193.4	174.7	33.9	1,672.3	714.4	N.A.	10.6	N.A.		2,437.0
1974	579.7	1,136.7	143.1	178.0	138.6	18.1	1,474.3	670.2	.7	9.2	19.4	20.4	2,194.2
1975	527.9	722.8	72.5	97.7	75.7	4.1	1,061.3	439.0	.5	4.5	14.0	15.3	1,534.5
1976	846.0	768.0	93.5	123.8	84.0	8.6	1,346.0	574.9	.5	3.1	15.4	19.7	1,991.9
1977	965.5	861.3	90.2	115.0	103.3	11.2	1,511.2	628.6	N.A.	6.6	N.A.	N.A.	2,185.0
1978[4]	1,026.1	794.7	111.9	117.1	114.6	24.9	1,517.4	619.2	.4	7.5	12.4	32.3	2,189.3
1979	1,099.0	701.9	92.1	105.6	129.5	30.4	1,499.6	610.2	.4	6.3	11.9	30.1	2,158.4
1980	960.2	583.0	67.6	84.3	117.4	49.7	1,308.9	511.6	.3	5.0	10.9	25.3	1,862.1
1981	1,198.9	489.2	66.7	121.8	101.9	46.7	1,449.6	536.2	.4	5.4	11.3	22.2	2,025.2
1982[1]	1,211.0	195.1	45.1	92.4	82.2	32.4	1,232.8	393.2	.4	4.4	7.6	19.7	1,658.1
1983[3]							1,244.6	500.3	.3	2.6			1,783.5

[1] Preliminary. [2] Primary & secondary. [3] Estimate. [4] Data prior to 1978 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

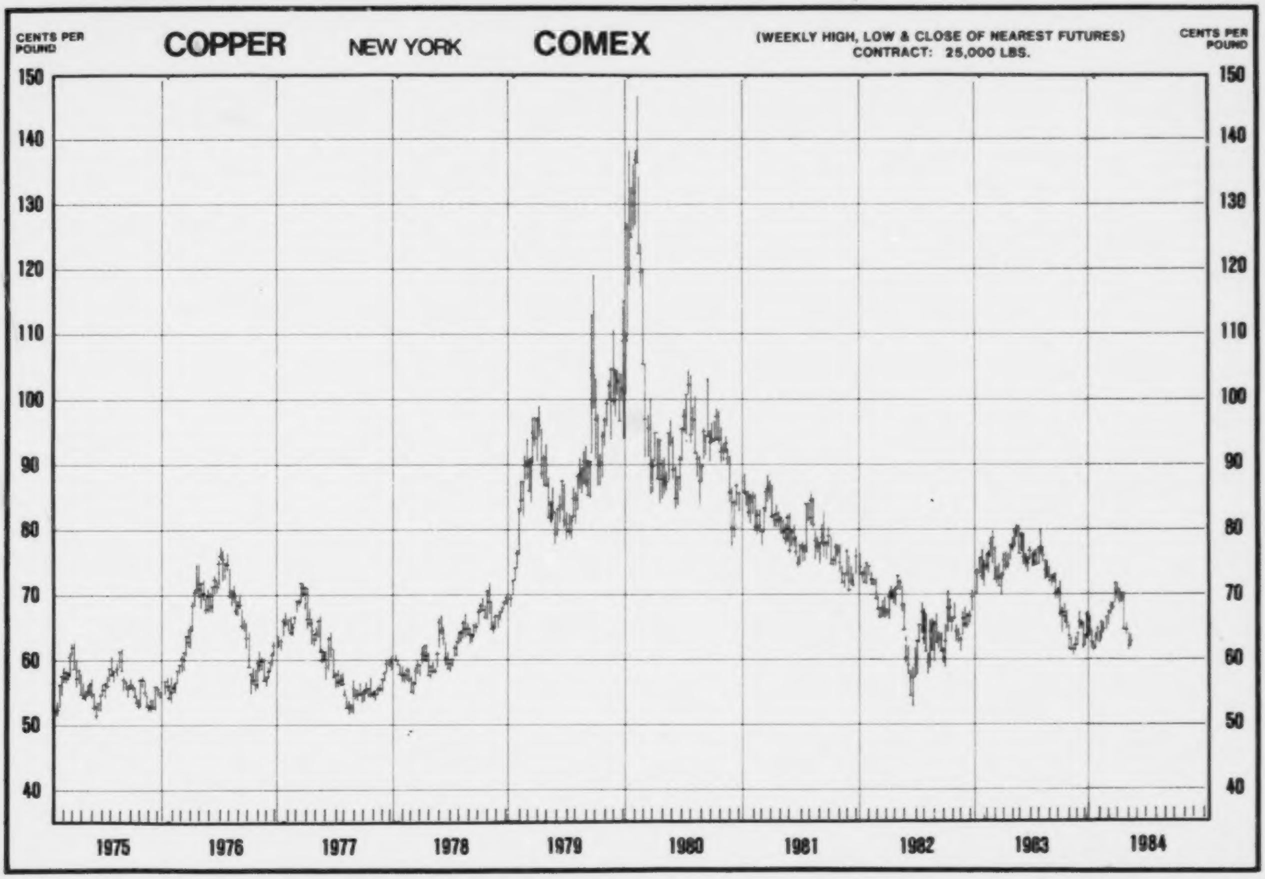
T.134

U.S. Mine Production of Recoverable Copper, by Selected States In Thousands of Metric[2] Tons

Year	Arizona	California	Colorado	Idaho	Michigan	Missouri	Montana	Nevada	New Mexico	Pennsylvania	Tennessee	Utah	Maine	Other States	Grand Total
1970	917.9	2.3	3.7	3.6	67.5	12.1	120.4	106.7	166.3	2.5	15.5	295.7	2.7	2.5	1,719.7
1971	820.2	.5	3.9	3.8	56.0	8.4	88.6	96.9	157.4	3.3	13.9	263.5	2.5	3.2	1,522.2
1972	908.6	.6	3.9	2.9	67.3	11.5	123.1	101.1	168.0	2.6	11.3	259.5	1.2	3.1	1,664.8
1973	927.3	.4	3.1	3.6	72.2	10.3	132.5	93.7	204.7	1.8	8.5	256.6	1.1	2.1	1,717.9
1974	858.8	.2	3.0	2.8	67.0	12.7	131.1	84.1	196.6	—	6.3	230.6	1.5	2.3	1,597.0
1975[2]	737.7	.3	3.2	2.9	66.9	12.9	79.8	73.7	132.7	—	9.1	160.7	1.8	.4	1,282.2
1976	929.3	.3	2.2	3.1	39.7	10.0	82.7	52.8	156.4	—	10.1	168.2	1.6	.2	1,456.6
1977	838.0	.2	1.7	3.7	38.4	10.6	78.2	60.8	149.4	—	5.6	176.1	1.2	.3	1,304.4
1978	891.4	N.A.	1.2	3.9	N.A.	10.8	67.3	20.5	127.8	—	11.3	186.3	—	37.1	1,357.6
1979	946.0	N.A.	.4	3.6	N.A.	13.0	69.9	N.A.	164.3	—	N.A.	193.1	—	53.3	1,443.6
1980	770.1	N.A.	.5	3.1	N.A.	13.6	37.7	N.A.	149.4	—	N.A.	157.8	—	48.9	1,181.1
1981	1,040.8	N.A.	N.A.	4.2	N.A.	8.4	62.5	N.A.	154.1	—	N.A.	211.3	—	56.8	1,538.2
1982	770.0	N.A.	.6	3.1	N.A.	7.9	57.1	N.A.	N.A.	—	N.A.	189.1	—	35.0	1,139.6
1983[1]	684.4			3.6		7.8	34.1					169.7			1,044.8

[1] Preliminary. [2] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

T.135

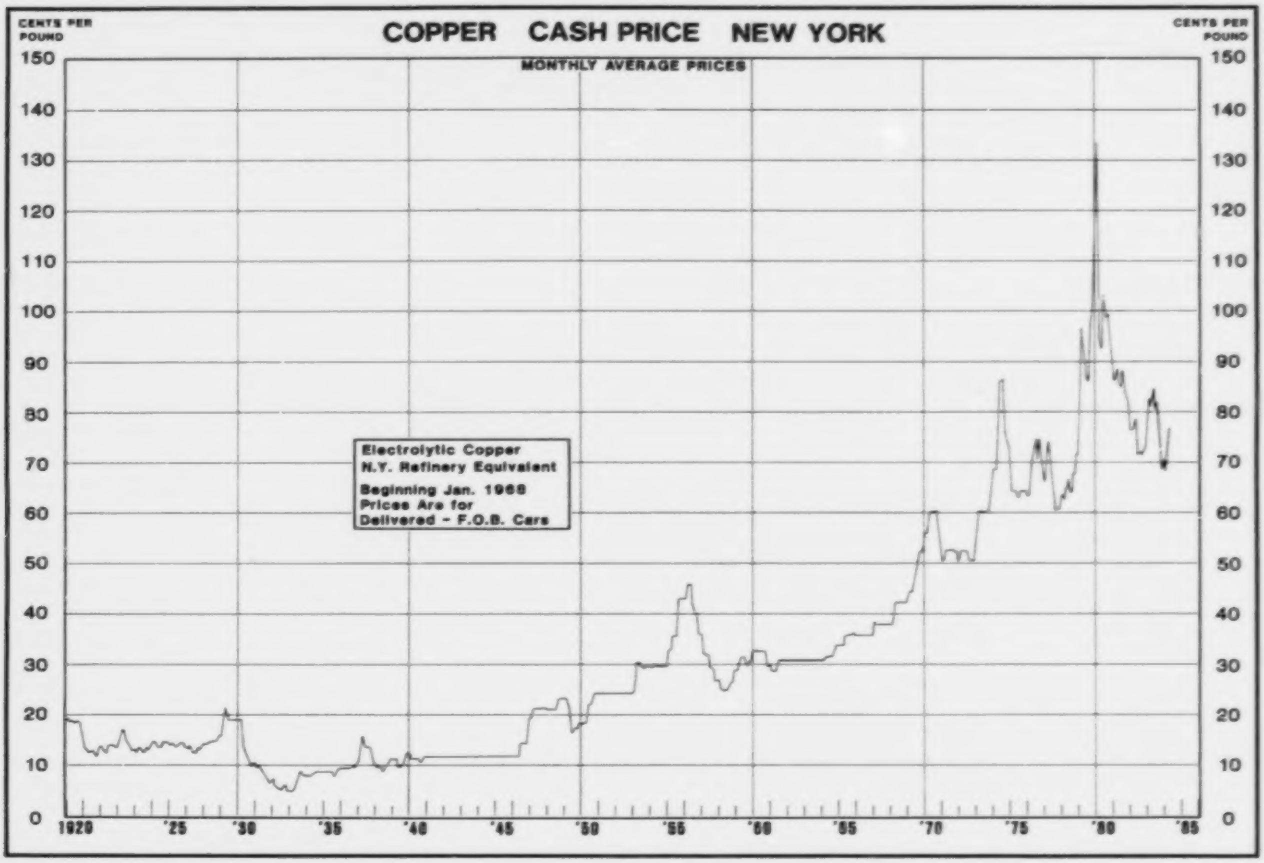


High, Low & Closing Prices of May Copper Futures on the Commodity Exch., Inc., N.Y. (COMEX) ¢ Lb.

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	75.80	76.40	71.90	68.50	63.60	59.20	59.90	60.60	58.80	62.40	62.70	59.80	62.00	62.40	64.40	76.40
	Low	75.50	67.60	63.80	61.80	59.90	55.40	56.90	56.60	56.30	58.80	58.10	56.00	55.50	57.00	57.80	55.40
	Close	75.80	68.40	64.80	64.40	59.90	57.70	58.60	57.40	58.80	61.20	59.00	56.50	60.60	59.10	64.40	—
1979	High	67.90	68.20	71.80	71.00	68.95	70.60	70.00	75.10	72.55	72.75	80.10	93.50	98.15	99.00	93.10	99.00
	Low	61.90	63.00	63.80	63.50	64.00	66.90	66.55	68.80	67.60	69.40	70.85	79.50	84.70	86.70	80.80	86.70
	Close	66.60	65.20	70.60	64.30	67.65	67.60	69.75	73.45	69.70	72.50	79.95	92.70	94.60	92.60	81.65	—
1980	High	97.60	97.50	93.10	87.85	87.35	94.50	111.90	117.05	102.50	106.50	140.80	148.40	123.30	94.90	95.50	148.40
	Low	86.70	88.70	81.90	82.00	79.75	83.70	87.20	87.50	91.50	95.00	104.20	121.00	85.20	83.80	84.80	79.75
	Close	94.85	93.10	82.95	82.75	82.80	93.40	105.80	92.60	102.50	104.75	131.60	123.00	87.10	87.90	94.60	—
1981	High	135.00	105.50	101.90	100.00	107.70	103.90	106.80	102.00	100.00	96.80	94.20	87.95	88.30	87.40	81.85	153.00
	Low	98.40	93.60	94.00	90.40	97.20	92.00	94.00	97.20	94.90	82.30	84.75	81.80	79.30	80.10	77.50	77.50
	Close	99.20	100.50	98.40	97.80	99.00	94.35	97.30	98.10	96.20	89.20	87.00	82.55	86.40	81.15	77.85	—
1982	High	100.00	99.65	96.00	94.10	92.80	95.50	87.40	84.90	81.70	80.50	77.70	76.25	71.75	71.25	72.90	115.20
	Low	92.80	94.00	91.35	86.70	85.20	85.80	79.80	79.40	74.85	74.00	73.00	71.10	66.70	66.10	66.65	66.10
	Close	98.85	95.20	93.20	86.80	93.10	87.45	82.10	81.65	77.35	77.30	76.35	71.15	67.55	70.70	66.70	—
1983	High	82.25	81.20	82.70	71.30	75.60	72.00	71.90	71.50	70.85	72.65	77.95	81.45	78.40	78.70	80.90	108.30
	Low	77.00	76.80	73.00	60.80	65.35	63.25	62.40	62.00	64.30	67.00	71.00	75.00	70.80	73.80	76.70	62.00
	Close	78.00	80.70	72.60	67.60	68.65	67.20	62.95	67.95	68.90	70.70	76.60	75.20	75.15	77.40	78.05	—
1984	High	85.40	86.00	87.60	83.80	85.05	83.00	78.95	71.70	70.65	69.40	68.10	67.30	71.80			
	Low	78.05	81.70	83.70	80.25	80.60	77.30	69.80	64.90	64.00	64.60	62.50	63.90	65.60			
	Close	82.60	84.30	84.80	81.25	82.45	77.60	70.25	66.10	69.15	68.30	65.70	66.10	71.75			
1985	High	71.80															
	Low	65.60															
	Close	71.75															

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

T.141



Producers' Prices of Electrolytic (Wirebar) Copper, Delivered U.S. Destinations In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	63.63	63.63	64.73	69.26	70.63	70.63	74.63	74.63	74.63	72.34	70.63	66.10	69.62
1977	66.13	68.63	72.54	74.41	72.77	70.13	68.10	63.89	60.63	60.63	60.63	62.11	66.72
1978	63.63	63.59	62.35	64.63	64.90	66.78	63.99	67.34	67.63	70.13	71.68	71.73	66.53
1979	76.15	89.41	94.65	98.66	91.04	87.66	86.02	89.94	95.07	98.84	98.44	106.08	92.75
1980	118.05	133.83	106.23	94.61	93.16	92.39	103.10	100.60	98.73	99.41	96.98	89.20	102.19
1981	88.64	86.07	87.32	88.44	86.33	85.68	84.71	87.98	85.63	83.28	82.09	80.94	85.59
1982	79.42	79.35	76.45	76.99	78.78	71.43	71.78	71.84	71.37	71.92	72.28	73.17	74.57
1983	79.03	82.72	81.09	82.44	84.80	80.90	81.81	79.80	76.75	71.58	68.64	70.43	78.33
1984	68.08	69.95	74.18										

Source: American Metal Market T.136

Dealers' Buying Price of No. 2 Heavy Copper Scrap at N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	36.98	37.92	39.76	41.95	44.10	43.66	46.93	45.73	43.71	38.48	35.00	34.10	40.69
1977	34.00	35.73	41.50	40.63	39.62	35.91	35.00	34.04	33.00	33.00	33.00	33.00	34.23
1978	34.00	35.61	35.59	39.73	39.18	41.77	40.50	41.89	42.50	44.70	45.40	44.75	40.47
1979	47.07	58.82	65.46	68.93	63.14	59.05	57.79	58.85	62.03	62.89	62.25	65.00	60.94
1980	74.91	82.35	70.30	60.18	57.60	56.50	65.36	64.88	64.21	65.37	66.08	58.36	65.51
1981	57.60	55.50	57.14	59.50	58.20	55.32	52.68	53.50	53.00	50.16	48.08	46.00	53.89
1982	45.50	45.50	43.76	41.50	41.40	37.82	36.07	37.82	37.50	37.50	38.90	39.50	40.23
1983	42.55	46.71	51.50	51.50	53.74	54.50	54.50	53.54	51.74	48.12	43.30	42.50	49.52
1984	41.17	40.60	43.59										

Source: American Metal Market T.140

U.S. Imports (for Consumption[4]) of Copper (Unmanufactured), by Sources and Types In Thousands of Metric[2] Tons

Year	Ore & Concentrates	Blister	Refined	Scrap	Australia	Canada	Mexico	W. Germany	Chile	Peru	Philippines	Yugoslavia	Zambia	South Africa	Total U.S. Imports
1974	53.4	207.8	313.6	31.2	2.7	151.3	16.8	8.7	131.9	108.9	14.3	15.1	2.8	38.4	608.6
1975	64.9	89.0	146.8	14.4	3.5	117.5	16.4	—	55.0	43.9	12.6	21.5	—	26.0	324.1
1976	70.7	44.5	381.5	19.7	7.0	148.0	9.1	—	102.0	40.1	15.0	45.6	128.3	4.9	534.7
1977	42.1	46.2	390.8	19.9	3.6	131.2	15.1	10.5	119.7	62.3	18.1	16.8	77.9	11.0	516.7
1978[2]	20.9	78.7	414.7	21.4	10.0	77.3	5.8	8.5	175.8	94.8	12.0	10.9	79.8	15.5	546.4
1979	22.4	68.1	215.2	22.2	2.1	89.0	8.5	6.1	116.2	52.8	15.4	3.4	15.9	2.0	328.3
1980[4]	52.4	44.5	426.9	22.8	5.4	152.4	8.3	.5	126.6	52.5	8.9	4.5	64.9	2.2	547.0
1981	39.1	30.1	330.6	27.0	1.5	108.5	23.8	—	137.8	52.0	20.4	2.4	44.1	—	429.6
1982[1]	118.1	97.4	258.4	28.1	3.7	111.0	64.4	—	233.0	26.8	27.1	—	10.5	—	506.0
1983[3]	90.6	46.4	459.6	43.7											643.5

Note: Includes refined; black, blister, & converter; scrap; & copper content of ore, matte, and regulus. [1] Preliminary. [2] Data prior to 1978 are in THOUSANDS OF SHORT TONS. [3] Estimate. [4] Prior to 1980, data is for general imports. *Source: Department of Commerce; Bureau of Mines*

T.137

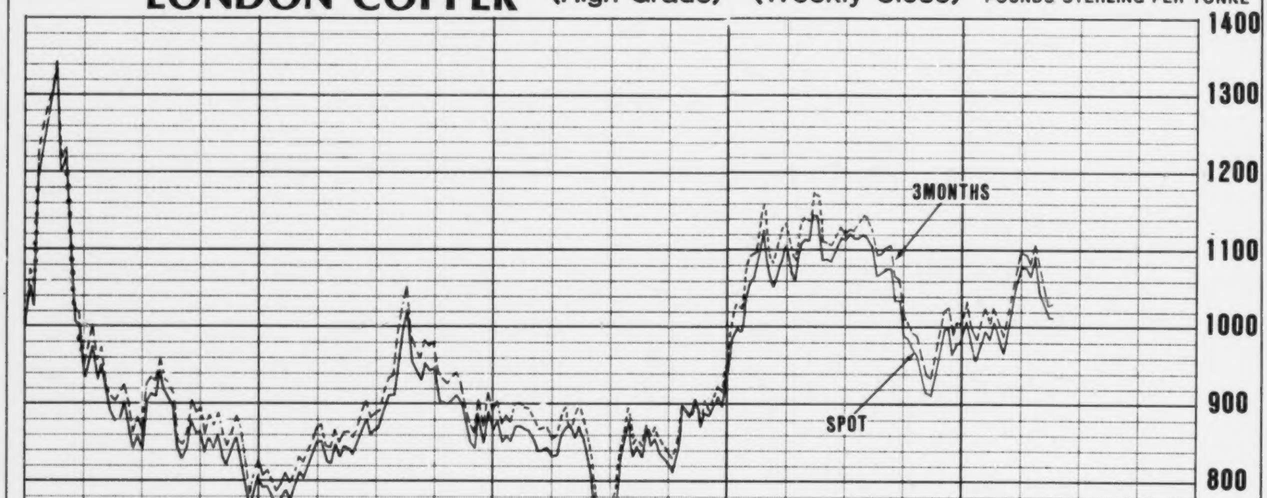
United States Exports of Refined Copper[1] to Selected Countries In Thousands of Metric[3] Tons

Year	Total U.S. Exports	United Kingdom	China Mainland	Belgium	Brazil	Canada	France	W. Germany	India	Italy	Netherlands	Taiwan	Sweden	Mexico	Japan
1974	126.5	14.5	—	2.5	24.0	11.4	19.1	11.7	.1	26.5	4.4	1.1	1.4		4.0
1975	172.4	15.1	—	13.2	24.7	6.7	22.8	34.1	.1	22.2	14.9	4.0	1.0		3.0
1976	111.9	20.3	—	1.0	2.8	4.7	21.0	26.8	—	15.6	5.0	—	5.0		4.7
1977	51.5	7.3	—	3.2	.1	8.1	9.8	10.2	—	6.2	2.4	—	1.5		1.5
1978[3]	91.9	13.8	3.0	2.5	3.3	5.1	7.0	18.1	—	19.0	3.0	.9	4.2	1.0	10.0
1979	73.7	6.5	3.1	2.5	6.2	4.5	12.5	3.5	—	11.4	6.6	1.2	2.8	.5	2.0
1980	14.5	2.0	—	.6	1.5	2.9	1.9	.8	.1	1.4	.6	.3	.1	.9	.8
1981	24.4	1.3	—	—	.8	6.4	1.1	1.1	—	.7	—	—	—	7.2	3.9
1982	30.6	1.3	16.1		.4	2.8	1.1	1.9		.1	3.3				.8
1983[2]	81.4														

[1] Bars, ingots or other forms. [2] Preliminary. [3] Data prior to 1978 are in THOUSANDS OF SHORT TONS. *Source: Department of Commerce*

T.138

LONDON COPPER (High Grade) (Weekly Close) POUNDS STERLING PER TONNE



Month End Open Interest of Copper Futures at COMEX In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	45,821	46,415	48,399	47,315	54,740	49,447	49,408	51,314	60,159	59,732	56,750	55,287
1979	53,776	56,481	55,719	48,857	45,572	43,992	39,372	58,966	63,825	58,451	62,659	64,363
1980	63,132	60,834	41,546	31,618	31,923	32,454	37,303	38,497	46,737	54,201	52,666	44,225
1981	47,300	47,641	48,699	49,784	52,527	52,325	54,011	54,781	57,153	58,054	52,654	52,226
1982	56,469	60,458	62,817	67,700	74,353	65,938	66,049	64,615	69,845	79,365	85,824	92,146
1983	113,044	121,875	116,706	105,451	99,198	101,350	109,829	106,882	108,357	104,204	104,087	106,898
1984	115,648	100,663	107,730									

Source: Commodity Exchange, Inc. of N.Y. (COMEX) T.142

Volume of Trading of Copper Futures at COMEX In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	75,219	88,765	119,423	112,834	117,745	135,363	98,274	160,456	95,360	158,815	151,284	95,150	1,408,688
1979	154,378	228,837	234,044	234,554	212,934	186,097	139,912	210,387	208,869	200,123	163,074	145,732	2,301,033
1980	243,069	205,232	185,692	121,708	102,054	130,678	148,698	125,062	169,370	132,850	127,110	156,556	7,848,080
1981	116,295	131,960	143,662	140,605	104,376	158,396	125,109	190,763	148,456	114,960	144,453	128,345	1,647,380
1982	112,118	166,562	135,434	179,854	174,157	249,276	197,828	245,973	169,909	231,771	273,546	226,257	2,362,625
1983	306,001	381,645	320,574	278,655	226,482	309,540	213,832	295,470	197,268	230,063	289,111	147,340	3,186,914
1984	199,461	259,881	217,635										

Source: Commodity Exchange, Inc. of N.Y. (COMEX) T.143

Commodity Exchange Inc. (COMEX) Warehouse Stocks of Copper In Thousands of Short Tons

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1975	43.2	53.6	59.0	60.8	68.3	70.6	67.6	73.4	74.8	77.7	89.7	95.9
1976	100.1	100.1	100.9	95.9	94.7	98.6	114.1	128.2	144.0	164.2	175.8	186.5
1977	201.0	204.1	211.1	214.0	214.4	211.4	211.1	205.1	201.0	200.1	195.1	189.1
1978	184.4	181.8	182.8	178.5	175.6	175.4	177.8	180.7	181.9	180.4	179.9	185.1
1979	179.2	170.8	156.4	133.6	118.3	89.9	70.7	61.5	56.8	57.0	64.9	71.3
1980	107.8	114.1	132.0	145.7	149.8	155.5	167.3	181.7	190.8	185.4	178.6	170.9
1981	179.6	179.3	179.8	173.3	182.4	175.5	170.6	168.8	167.5	171.6	173.1	171.4
1982	187.6	189.3	193.6	195.7	198.5	201.5	202.2	207.4	211.8	207.1	210.3	246.3
1983	274.4	278.5	293.6	306.1	325.9	336.5	347.4	360.1	374.5	389.3	396.1	404.2
1984	409.2	417.7	409.9	403.2								

Source: Commodity Exchange, Inc. N.Y. (COMEX) T.144

Exports of Refined Copper from the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	8.2	13.1	9.5	10.0	19.8	12.4	6.9	7.0	6.9	8.2	13.3	11.3	126.5
1975	19.7	20.8	14.3	24.9	21.3	13.5	9.8	6.7	11.5	12.5	9.0	8.4	172.4
1976	11.2	8.5	10.8	10.9	8.6	9.4	8.7	9.4	10.0	11.5	7.3	6.8	113.1
1977	3.7	1.8	3.6	5.2	5.2	5.2	5.5	1.6	4.4	4.6	5.0	6.9	52.7
1978	4.7	4.9	11.9	7.3	11.4	10.1	7.2	10.2	22.2	5.3	5.3	8.8	109.3
1979	9.8	9.4	11.6	10.0	8.9	8.7	4.8	2.9	2.9	2.7	7.3	1.5	80.5
1980	1.0	1.4	1.9	1.5	1.5	2.0	1.9	.9	.4	.5	1.0	3.4	17.4
1981	2.9	2.5	5.8	1.2	.9	3.5	1.3	1.7	3.0	.7	2.1	1.8	27.2
1982	.4	.6	.9	1.0	1.6	1.6	2.9	5.4	9.9	8.6	.8	1.1	34.8
1983	13.4	.7	1.5	2.0	3.2	2.9	18.1	13.4	4.1	14.2	2.8	11.2	87.5
1984													

Source: Department of Commerce T.139

COPPER

Refined Copper Production Outside the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

	Refined													— Crude —	
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Primary	Secondary
1971	209.2	192.7	224.7	222.4	227.1	222.3	229.9	205.1	220.1	229.9	243.9	240.5	2,668	2,948	82.3
1972	203.4	228.3	231.2	229.5	242.2	257.1	239.2	233.8	238.8	252.2	239.7	257.0	2,853	3,074	69.5
1973	220.8	205.1	260.3	238.0	241.7	236.3	254.1	261.5	234.2	275.6	251.0	265.1	2,918	3,185	89.9
1974[2]	339.3	310.0	351.5	340.0	365.6	347.4	376.2	368.5	367.6	381.4	351.5	344.5	4,244	—4,818—	
1975	323.3	299.5	348.1	336.6	330.8	314.7	303.9	305.4	318.2	338.4	311.3	335.6	3,866	—4,449—	
1976	330.3	314.3	335.3	341.0	336.7	355.1	365.3	355.7	371.7	375.2	359.3	359.2	4,199	—4,947—	
1977	358.1	352.1	380.2	363.0	383.5	386.7	361.7	379.7	372.0	367.4	388.5	393.5	4,486	—5,046—	
1978	387.3	344.0	395.9	348.7	401.9	388.1	371.9	348.4	350.0	381.9	364.5	351.5	4,434	—4,868—	
1979	359.8	347.9	360.1	336.9	345.1	364.9	358.1	377.2	366.5	400.9	388.0	382.6	4,388	—4,791—	
1980	384.2	382.8	408.4	398.3	418.7	396.8	392.2	402.9	386.1	394.4	371.8	389.9	4,727	—4,968—	
1981	359.7	347.9	393.6	390.0	388.0	391.4	377.0	377.7	378.8	379.9	366.9	393.8	4,545	—4,891—	
1982	398.2	381.0	442.6	391.8	365.2	403.9	368.4	365.8	386.1	405.8	411.8	372.6	4,693	—5,065—	
1983[1]	386.8	366.3	411.8	400.0	401.2	418.0	381.9	404.3	395.9	404.5	393.1	404.0	4,768	—5,190—	
1984[1]	386.8														
1985															

[1] Preliminary. [2] New series. Not comparable prior to 1974. *Source: American Bureau of Metal Statistics, Inc.* T.148

Refined Copper Production in the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

	Refined													Crude	
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Primary	Secondary
1971	175.6	168.4	182.6	159.5	177.4	164.2	55.4	87.5	132.7	151.2	170.0	162.6	1,787	1,315	106.8
1972	159.5	161.0	184.7	168.2	181.1	179.3	143.5	162.6	178.4	174.2	170.8	163.5	2,027	1,517	119.8
1973	168.6	165.5	185.7	165.6	185.5	173.8	154.1	151.3	151.8	173.2	158.6	163.3	1,997	1,526	120.1
1974	157.7	135.5	164.6	163.9	157.3	140.8	101.1	87.2	130.9	177.5	171.1	153.9	1,742	1,334	104.7
1975	146.0	108.8	142.8	136.5	140.8	129.9	124.7	118.2	112.7	133.3	118.3	138.8	1,551	1,239	72.6
1976	130.3	126.6	127.7	141.1	140.8	141.6	144.0	139.0	141.1	158.1	153.3	154.0	1,698	—1,445—	
1977	140.9	140.9	162.3	150.6	166.2	152.4	52.2	46.3	124.4	120.6	137.3	113.0	1,507	—1,386—	
1978	129.0	112.5	143.2	141.0	145.3	135.1	96.1	138.9	144.9	163.4	162.4	133.3	1,645	—1,434—	
1979	135.6	135.8	152.2	149.8	154.6	149.4	132.3	144.9	137.5	148.7	170.0	155.5	1,766	—1,542—	
1980	161.0	149.5	162.3	170.4	158.7	167.2	52.4	28.7	27.3	61.0	85.8	136.9	1,361	—1,205—	
1981	133.5	116.3	152.2	155.8	135.0	158.3	131.7	124.0	140.5	127.3	124.9	147.9	1,647	—1,429—	
1982	117.5	123.4	121.5	116.4	107.5	108.6	81.8	77.6	80.6	80.1	92.1	90.8	1,198	—1,026—	
1983[1]	97.3	100.6	131.9	125.5	112.2	114.5	73.1	90.6	91.2	110.4	89.1	100.2	1,237	—1,077—	
1984[1]	98.8	100.7													
1985															

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.* T.149

Refined Copper Deliveries to Fabricators in the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	156.8	151.5	164.7	170.8	190.7	193.1	71.0	97.3	126.1	139.1	157.5	141.7	1,760
1972	134.6	151.6	180.6	164.2	181.4	186.9	148.2	145.8	163.2	180.0	172.2	176.7	1,985
1973	190.6	171.2	207.4	191.9	191.7	187.5	162.3	147.3	163.6	191.5	185.5	165.4	2,155
1974	170.7	161.8	178.4	198.4	204.1	186.4	129.5	109.5	143.1	152.3	118.8	86.1	1,911
1975	99.3	84.3	94.2	95.8	115.0	118.2	110.5	127.0	137.5	131.2	117.2	115.7	1,346
1976	137.9	132.7	206.2	175.5	171.7	158.6	150.6	134.5	151.0	150.6	122.6	137.4	1,829
1977	166.6	138.2	202.0	195.6	185.3	192.4	104.5	100.6	100.5	145.7	135.9	141.0	1,808
1978	137.7	141.3	190.2	148.7	175.9	159.8	133.4	168.9	179.2	170.4	177.7	179.7	1,963
1979	191.1	174.8	193.5	182.4	204.7	192.4	166.4	179.3	157.4	190.4	161.4	156.7	2,151
1980	173.5	153.7	193.5	167.8	176.3	175.0	98.7	85.0	83.7	106.6	128.7	154.5	1,697
1981	153.0	154.2	196.5	165.1	169.1	158.8	150.6	152.7	157.5	159.5	131.6	131.2	1,880
1982	134.6	112.2	131.5	114.2	121.0	111.4	106.2	110.6	131.8	113.3	78.4	119.2	1,384
1983[1]	126.2	141.1	185.3	156.0	165.9	164.4	91.0	105.2	141.2	137.1	110.2	141.3	1,665
1984[1]	119.3	137.1											
1985													

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.* T.147

Refined Copper Deliveries to Fabricators Outside the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	220.9	213.4	251.1	266.7	238.8	240.8	230.2	190.9	198.1	224.1	242.9	240.3	2,758
1972	227.9	230.8	236.2	226.0	244.8	249.7	220.5	214.8	268.0	222.8	242.5	266.1	2,850
1973	266.4	249.3	317.7	257.9	243.4	275.8	211.0	268.4	263.5	270.3	255.0	239.7	3,119
1974[2]	342.0	302.7	365.3	328.7	356.9	306.6	291.1	325.5	316.4	339.8	334.8	303.5	3,913
1975	287.7	315.0	330.4	288.8	301.9	304.8	231.1	232.8	250.4	274.3	269.2	303.0	3,389
1976	308.4	309.3	351.0	359.9	336.2	362.0	296.3	331.0	380.7	372.9	315.8	349.3	4,073
1977	331.6	305.6	405.0	342.6	364.9	360.0	326.5	344.9	339.8	350.7	374.0	390.8	4,236
1978	338.5	370.0	422.6	372.1	400.8	426.0	362.4	402.9	382.7	376.8	360.2	376.8	4,592
1979	424.2	395.9	460.4	342.0	349.1	383.3	376.8	357.7	408.5	390.2	377.6	386.4	4,658
1980	386.2	403.2	400.0	407.6	396.9	376.6	357.3	346.7	389.5	406.5	374.4	375.8	4,653
1981	336.8	353.7	383.2	385.4	380.8	382.7	346.0	355.9	393.4	369.5	373.9	364.5	4,426
1982	373.4	380.1	423.6	387.4	348.3	365.4	341.4	342.8	354.9	343.5	331.3	301.6	4,294
1983[1]	298.9	320.5	371.1	325.7	392.0	454.3	402.6	308.2	360.6	388.7	350.1	385.9	4,359
1984[1]	368.5												
1985													

[1] Preliminary. [2] New series. Not comparable prior to 1974. *Source: American Bureau of Metal Statistics, Inc.* T.146

Refined Copper Stocks in the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1971	160.6	173.3	174.5	164.3	131.3	110.4	70.4	59.9	61.0	80.8	100.8	106.7
1972	103.0	131.3	132.8	124.3	123.1	125.1	128.7	123.9	140.9	157.8	161.0	158.2
1973	157.4	142.6	140.4	126.1	97.2	95.0	82.2	72.0	71.5	63.1	55.3	36.5
1974	49.1	49.9	43.8	57.5	66.5	61.1	39.8	42.9	54.8	61.5	89.4	135.7
1975	194.9	242.7	259.2	297.8	320.6	334.6	338.2	349.5	341.8	312.3	314.9	324.6
1976	360.7	363.4	370.9	347.8	343.0	325.2	317.1	350.4	355.8	356.1	372.8	416.5
1977	473.8	469.3	487.0	472.3	442.1	447.6	435.0	408.9	370.6	409.4	418.0	456.9
1978	471.1	488.7	491.6	470.2	480.5	465.5	464.0	430.9	418.0	405.9	416.4	408.9
1979	367.0	318.4	287.5	262.1	237.4	197.8	176.0	174.6	158.0	154.6	148.6	167.3
1980	186.3	203.5	228.2	237.1	269.1	277.3	295.7	310.6	301.0	274.6	265.0	246.0
1981	253.0	261.6	249.4	236.8	245.5	243.4	264.7	276.9	276.0	275.5	281.6	301.2
1982	338.6	351.9	375.9	387.3	409.8	422.5	448.1	463.7	449.9	436.2	438.2	470.8
1983[1]	484.5	489.6	501.6	508.9	524.1	519.4	498.7	509.0	522.7	509.1	514.2	505.2
1984[1]	475.3	497.8	499.6	483.3								
1985												

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.* T.145

Refined Copper Stocks Outside the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1971	318.6	330.8	327.7	332.7	314.2	313.4	308.9	306.1	314.1	327.6	331.4	342.2
1972	371.8	349.0	358.1	368.2	380.1	378.2	378.8	400.9	422.4	394.2	420.1	421.8
1973	410.3	361.4	322.4	263.0	249.7	250.5	215.8	267.9	274.0	249.4	255.8	261.8
1974[2]	348.7	320.9	323.4	311.5	320.6	332.7	370.3	444.0	459.4	494.4	526.9	543.1
1975	591.2	628.8	624.5	655.8	723.1	766.0	784.7	861.5	933.4	1,007	1,072	1,108
1976	1,135	1,150	1,149	1,086	1,048	1,045	1,040	1,080	1,112	1,102	1,102	1,141
1977	1,117	1,158	1,200	1,166	1,183	1,185	1,195	1,210	1,229	1,247	1,240	1,225
1978	1,201	1,231	1,139	1,139	1,104	1,099	1,052	1,059	1,001	960.2	962.0	963.1
1979	942.2	878.2	862.4	765.1	758.8	756.7	727.2	687.1	696.6	648.2	635.4	641.3
1980	619.5	598.3	560.9	534.6	516.5	525.9	531.2	530.9	553.2	527.9	489.1	472.6
1981	476.2	485.2	471.0	463.0	458.8	449.8	446.0	454.9	454.7	433.4	419.4	403.0
1982	432.5	446.3	448.4	459.6	452.0	458.7	479.3	492.0	503.6	522.7	575.1	642.9
1983[1]	699.9	760.8	766.4	759.1	795.5	780.0	722.2	683.0	757.4	767.2	765.2	810.4
1984[1]	842.1	837.3										
1985												

[1] Preliminary. [2] New series. Not comparable prior to 1974. *Source: American Bureau of Metal Statistics, Inc.* T.150

Corn

Heavy U.S. producer participation in the 1983 USDA acreage reduction programs and severe drought cut corn acreage and yields sharply and were the principal reasons for a projected 12 percent reduction in 1983/84 world coarse grain production from the estimated record-large global output in 1982/83. (Coarse grains include corn, sorghum, barley, oats and rye.) Global carryover stocks were expected to drop an unprecedented 56 percent from the previous season's record, to the lowest in 8 years, and world stocks at the end of 1983/84 as a percent of use were projected to fall to about 8 percent—the lowest in more than 10 years.

Planting of the 1983 U.S. corn crop made a slow start in many areas due to wet fields and frequent rains. Development was behind normal early in the summer owing to the cool, wet weather. Then hot, dry weather in July placed the crop under considerable stress—particularly in the Corn Belt states. (Recent previous droughts, in 1974 and 1980, had occurred mostly in fringe areas.) The crop continued to deteriorate in August as hot, dry conditions persisted and yields were cut significantly. Rain was received across the Corn Belt by mid-September but it was too late to revive the crop. The hot, dry weather hastened maturity and the harvest was completed under mostly excellent conditions well ahead of normal.

Acreage harvested for grain was estimated at 51.5 million acres, down 29 percent from 1982 harvested acreage. The proportion of planted acreage that was harvested for grain was 86 percent compared with 89 percent in 1982. About one-half of the approximate drop of 50 percent in 1983 U.S. corn production resulted from the reduced acreage—from 73 million the previous year to 51.5 million in 1983—primarily because of the payment-in-kind (PIK) program participation by producers. The other half of the drop in production was accounted for by a 29 percent reduction in yield per acre—to 81.6 bushels from 114.5 bushels in 1982—primarily due to the drought.

The 1983/84 total U.S. supply of corn on October 1, 1983 was the lowest since 1976, at 7.3 billion bushels. Of the total supply, carryover stocks of 3.1 billion bushels accounted for 42 percent and the 1983 crop made up the remaining 58 percent. Almost 1.2 billion bushels of the October 1, 1983 corn stocks were in the CCC inventory and 1.9 billion in private hands. However, prices had previously advanced, because of the drought, to the trigger levels for the redemption of the farmer-owned reserve (FOR) IV $3.15 per bushel and V—$3.25 per bushel. With both reserves triggered, about 1.2 billion bushels of October 1, 1983 carryover stocks were available to the market compared with only 261 million a year earlier, which is one reason why corn prices during October–December 1983 averaged lower than expected during a period of seasonally increasing demand and reduced total supplies.

U.S. corn disappearance for the 1983/84 season was projected by the USDA in April 1984 at 6.8 billion bushels, down from 7.4 billion in 1982/83. The reduction was expected to come from lower feed use—which was projected at about 4.0 billion bushels versus 4.6 billion. The inventory of livestock and poultry consuming grain during October–December 1983—weighted for relative rates of feed consumption per class—was up about 1.0 percent from a year earlier, but the outlook was for reduced numbers of grain-consuming animal units as the season progressed.

Exports of corn for the 1983/84 season were projected by the USDA at 1.9 billion bushels, slightly higher than in the previous season, and ending stocks of 520 million bushels were projected versus 3.1 billion on October 1, 1983. The farmer-owned reserve (FOR) was expected to hold only about 50 million bushels versus 1.55 billion a year earlier, and the CCC inventory was expected to total 175 million bushels versus 1.15 billion bushels. "Free" stocks were projected at 295 million bushels compared with 440 million at the end of the 1982/83 season.

The February 16, 1984 USDA Prospective Plantings report indicated that corn growers intended to plant 81.8 million acres in 1984, up 36 percent from 1983, but about the same acreage as planted in 1982. However, corn-soybean price relationships and weather around planting time were expected to influence producers' planting decisions. The 81.8 million acre seeding intentions implied a participation rate of 40 to 50 percent in the corn program. However, 54.7 percent (44.5 million acres) of the corn base acreage was enrolled in the 1984 acreage reduction program. The initial USDA Supply/Demand projections for the 1984/85 corn season placed production at 7,775 million bushels, total domestic use at 5,150 million, exports at 2,025 million bushels, and ending stocks at 1,121 million bushels versus estimated September 30, 1984 stocks of 520 million.

U.S. Government Price Support

The Secretary of Agriculture on September 29, 1983 announced a 10-percent acreage reduction program for feed grains. In order to participate in the program a producer was obliged to limit corn and sorghum acreage planted for harvest to not more than 90 percent of the farm's corn-sorghum base and devote 11.11 percent of the 1984 planted acreage to conservation uses. The national average loan rate was set at $2.55 per bushel and the target price at $3.03 per bushel. There is no PIK program for 1984-crop corn, and corn can be entered in the farmer-owned reserve only at the time of loan maturity. The Agricultural Programs Adjustment Act of 1984, signed by President Reagan in early April, provided for an acreage cutback of 5 to 20 percent through combined acreage reduction and paid diversion. At the time of signup, 50 percent of the diversion payment (at a rate of at least $1.50 per bushel, would be available to participating growers.

The USDA announced in early April 1984 that no deficiency payments were required to farmers in the 1983 feed grain program because the national weighted average price for corn (October through February) of $3.15 per bushel was above the target price of $2.86 per bushel.

Futures Markets

Corn futures are traded on the Chicago Board of Trade and on the Chicago MidAmerica Commodity Exchange.

World Coarse Grains Supply & Demand In Millions of Metric Tons/Hectares

Crop Year	Area Harvested	Yield	Production	World Trade[1]	Utilization Total[2]	Ending Stks[3]	Stocks as % of Util
1980/81	341.3	2.14	730.5	108.8	739.8	83.7	11.4
1981/82	349.9	2.20	770.6	98.6	741.6	112.7	15.1
1982/83[4]	339.0	2.31	782.7	91.6	757.7	137.7	18.1
1983/84[5]	336.0	2.04	684.3	92.9	762.1	60.0	7.9

Note: "Stocks as percent of utilization" represent the ratio of marketing year ending stocks to total utilization. [1] Trade data as expressed in this table exclude intra-EC trade. The trade year is October/September. [2] For countries for which stocks data are not available (excluding the USSR) utilization estimates represent "apparent" utilization, i.e., include annual stock level adjustments. [3] Stocks data are based on an aggregate of differing local marketing years and should not be construed as representing world stock levels at a fixed point in time. Stocks data are not available for all countries and exclude those such as the People's Republic of China and parts of Eastern Europe. World Stock Levels have been adjusted for estimated year-to-year changes in USSR grain stocks, but do not purport to include the absolute level of USSR grain stocks. [4] Preliminary. [5] Projection. *Sources: Prepared or estimated on the basis of official statistics of foreign governments, other foreign source materials, reports of U.S. Agricultural Attaches and Foreign Service Officers, results of Office Research and Related Information.* 150a

World Production of Corn or Maize In Millions of Metric Tons

Crop Year	United States	Argentina	Brazil	Mexico	South Africa	France	China	India	Italy	Bulgaria	Hungary	Yugoslavia	Romania	Indonesia	USSR	World Total
1979-0	201.7	6.4	20.2	9.2	10.8	10.4	60.0	5.6	6.2	3.2	7.3	10.1	12.4	3.6	8.4	424.2
1980-1	168.8	12.9	22.6	10.4	14.6	9.2	62.6	7.0	6.4	2.3	6.5	9.3	10.3	4.0	9.5	407.2
1981-2	208.3	9.6	22.9	12.5	8.4	9.0	59.2	6.8	7.2	2.5	6.8	9.8	9.5	4.5	8.0	441.2
1982-3[1]	212.3	9.0	19.5	7.0	3.9	9.8	60.3	6.3	6.9	3.2	7.9	11.1	11.8	3.8	13.5	439.7
1983-4[2]	106.8	10.0	20.5	9.3	4.0		66.3								16.2	343.4

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.* T.151

Acreage and Supply of Corn in the United States In Millions of Bushels

Year Beginning October	Planted All Purposes	Harvested For Grain	Harvested For Silage	Harvested For Forage	Yield, Per Harv. Acre-Bus.	Carry-over, October 1 Farm	Carry-over CCC Bins	Carry-over Others[3]	Carry-over Total	Grain Production	Imports[2]	Total (All Supply Grain)
	In Millions of Acres											
1979-0	81.4	72.4	8.0	.4	109.7	794.5	—1,104 —		1,304	7,939	1.1	9,244
1980-1	84.0	73.0	9.2	.6	91.0	920.9	— 696.6—		1,618	6,645	1.2	8,264
1981-2	84.2	74.7	8.2	.4	109.8	490.1	— 543.8—		1,034	8,202	1.2	9,237
1982-3	81.8	73.0	7.9	.3	114.5	1,252	— 929.9—		2,182	8,359	.9	10,543
1983-4[1]	60.2	51.5	7.7	.3	81.6	1,532	—1,609 —		3,140	4,204	1.0	7,345
1984-5[4]	81.8											

[1] Preliminary. [2] Includes grain equivalent of cornmeal & flour. [3] Interior mills & elevators and terminal mkts. [4] Estimate. *Source: Commodity Economics Division, U.S.D.A.* T.152

U.S. Corn Supply and Disappearance In Millions of Bushels

Year & Periods Begin. Oct. 1	Supply: Beginning Stocks	Supply: Production	Supply: Imports	Supply: Total Supply	Disappearance, Domestic Use: Food	Alc. Beverages	Seed	Feed	Total	Exports	Total Disappearance	Ending Stocks: Gov't. Owned[1]	Privately Owned[2]	Total
1980-1	1,618	6,645	1.2	8,264	641.8	73.3	20.2	4,139	4,874	2,355	7,230	237.8	796.2	1,034
Oct.-Dec.	1,618	6,645	.2	8,263	136.3	16.6	—	1,523	1,676	727.8	2,404	254.3	5,605	5,859
Jan.-Mar.	5,857	—	.3	5,859	116.3	18.6	4.0	1,100	1,239	632.9	1,872	250.0	3,737	3,987
Apr.-May	3,997	—	.1	3,987	106.7	13.8	12.2	684.7	817.4	395.7	1,213	251.6	2,523	2,774
June-Sept.	2,774	—	.6	2,775	282.5	24.6	4.0	830.9	1,142	598.8	1,741	237.8	796.2	1,034
1981-2	1,034	8,202	1.2	9,237	709.4	82.7	19.4	4,276	5,088	1,967	7,054	302.4	1,880	2,182
Oct.-Dec.	1,034	8,202	.4	9,236	153.2	16.8	—	1,553	1,723	545.5	2,268	247.6	6,720	6,968
Jan.-Mar.	6,968	—	.3	6,968	128.4	20.2	3.9	1,194	1,347	489.4	1,836	261.7	4,870	5,132
Apr.-May	5,132	—	.1	5,132	119.4	15.2	12.1	672.1	818.8	409.0	1,228	269.7	3,634	3,904
June-Sept.	3,904	—	.4	3,905	308.4	30.5	3.4	856.8	1,199	523.0	1,722	302.4	1,880	2,182
1982-3[3]	2,182	8,359	.9	10,543	774.3	109.0	14.5	4,635	5,532	1,870	7,402	1,166	1,974	3,140
Oct.-Dec.	2,182	8,359	.3	10,542	175.2	27.9	—	1,542	1,745	512.7	2,258	429.0	7,855	8,284
Jan.-Mar.	8,424	—	.2	8,284	140.0	28.0	1.3	1,360	1,529	507.9	2,037	483.4	5,764	6,247
Apr.-May	6,247	—	.1	6,247	125.0	17.6	10.3	823.7	976.6	308.5	1,285	491.7	4,471	4,962
June-Sept.	4,962	—	.3	4,963	334.1	35.5	2.9	908.9	1,281	540.9	1,822	1,166	1,974	3,140
1983-4[4]	3,140	4,204	1.0	7,345	—	950.0	—	3,975	4,925	1,875	6,800			545.0
Oct.-Dec.	3,140	4,204	.3	7,344	200.3	19.7	—	1,667	1,887	528.9	2,416	1,225	3,704	4,929
Jan.-Mar.														

[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary. [4] Estimate. *Source: Commodity Economics Division, U.S.D.A.* T.154

CORN

Corn Production Estimates and Cash Prices in the U.S.

Crop Year	Corn for Grain Production Estimates							St. Louis No. 2 Yellow	Los Angeles No. 2 Yel.	Season Farm Avg. Price[1]	K.C. White No. 2	Value of Production (Million Dollars)
	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Final					
	In Thousands of Bushels							$ per bushel				
1975–6	6,045,621	5,849,662	5,687,248	5,737,266	5,803,596	5,766,991	5,840,757	2.70	3.34	2.54	2.92	14,818
1976–7	6,552,665	6,186,979	5,891,823	5,865,243	6,063,459	6,216,032	6,289,169	2.25	2.86	2.15	2.91	13,524
1977–8	6,330,668	6,092,054	6,229,084	6,303,034	6,366,864	6,357,424	6,505,041	2.23	2.99	2.02	3.30	13,107
1978–9	6,145,421	6,503,190	6,797,650	6,823,720	6,890,310	7,081,849	7,269,921	2.51	3.39	2.25	2.93	16,281
1979–0	6,662,681	7,108,938	7,268,175	7,390,365	7,585,535	7,763,771	7,938,819	2.73	3.74	2.52	4.70	19,904
1980–1	7,284,036	6,645,842	6,534,370	6,466,622	6,461,244	6,647,534	6,644,841	3.35	4.48	3.11	4.96	20,571
1981–2	7,115,069	7,734,941	7,940,421	8,081,444	8,097,231	8,200,951	8,201,598	2.61	3.92	2.50	2.60	20,406
1982–3	——	8,315,088	8,318,678	8,314,938	8,329,808	8,397,334	8,359,364	2.98		2.68		22,403
1983–4[2]	——	5,236,558	4,390,443	4,259,408	4,120,983	4,203,777		3.19		3.30		13,873

[1] Includes an allowance for unredeemed loan & purchase agreement deliveries valued at the average loan rate. [2] Preliminary. *Source: Economic Research Service; Crop Reporting Board, U.S.D.A.* T.153

Production of Corn (For Grain) in the United States, by States In Millions of Bushels

Year	Illinois	Indiana	Iowa	Kansas	Kentucky	Michigan	Minn.	Missouri	Nebraska	No. Car.	Ohio	Pa.	South Dakota	Wisconsin	Texas
1975	1,254	551.7	1,118	141.0	87.8	167.2	407.4	170.1	503.2	106.5	310.6	88.6	83.3	198.4	—
1976	1,240	693.0	1,174	171.8	138.7	153.9	330.4	173.9	518.5	150.4	393.5	103.5	37.2	151.0	186.0
1977	1,163	633.4	1,092	161.3	132.3	197.2	600.0	201.4	648.5	88.7	380.1	106.7	126.9	291.2	161.7
1978	1,240	669.6	1,478	153.0	119.9	194.4	643.8	200.1	762.8	121.6	379.1	115.9	177.6	294.0	144.0
1979	1,414	675.4	1,664	172.0	132.6	237.5	606.0	240.0	822.3	128.4	417.5	121.6	210.9	317.2	132.3
1980	1,066	602.9	1,463	110.9	103.6	247.0	610.1	109.7	603.5	103.8	440.7	96.0	121.9	348.4	117.0
1981	1,454	654.0	1,759	148.1	149.0	273.6	744.7	213.4	791.2	140.9	360.0	134.4	180.6	378.0	127.5
1982	1,514	815.3	1,578	140.2	157.9	307.4	734.5	204.9	770.3	158.6	475.0	126.1	192.7	361.8	119.7
1983[1]	632.0	340.8	743.9	83.6	46.1	172.0	367.1	74.4	475.2	76.8	232.4	72.5	103.4	223.1	104.7

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.157

Corn (Shelled & Ear) Stocks in the United States In Millions of Bushels

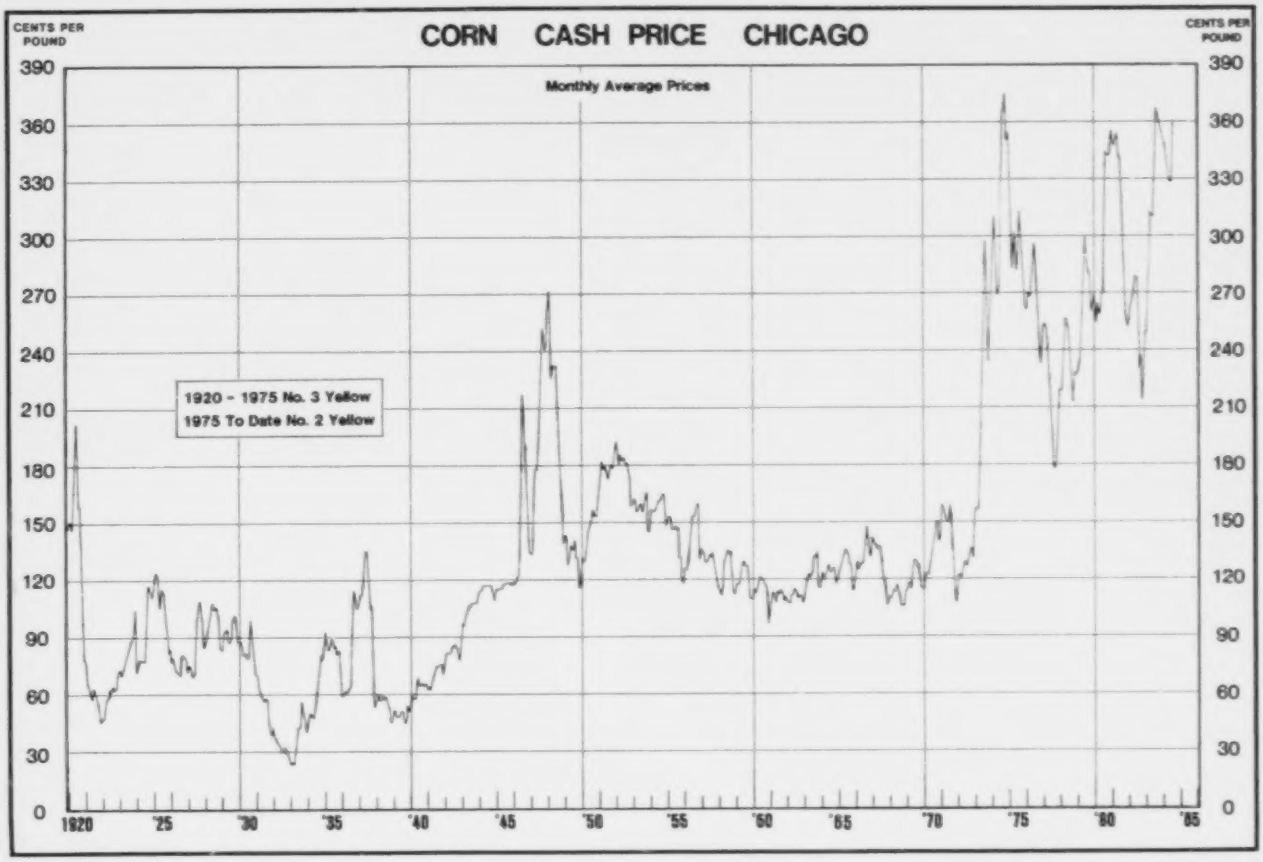
Year	On Farms				Off Farms				Total Stocks			
	Jan. 1	Apr. 1	June 1[3]	Oct. 1[2]	Jan. 1	Apr. 1	June 1[3]	Oct. 1[2]	Jan. 1	Apr. 1	June 1[3]	Oct. 1[2]
1975	2,541	1,509	804	191	1,080	705	346	168	3,621	2,214	1,150	359
1976	3,196	1,920	1,290	233	1,270	913	577	166	4,467	2,833	1,867	399
1977	3,345	2,134	1,578	446	1,544	1,159	787	438	4,890	3,293	2,365	884
1978	3,824	2,517	1,849	659	1,679	1,360	989	445	5,503	3,877	2,837	1,104
1979	4,638	3,178	2,318	794	1,681	1,322	969	509	6,319	4,500	3,287	1,304
1980	5,042	3,441	2,578	921	1,844	1,416	1,093	697	5,886	4,857	3,670	1,617
1981	4,141	2,641	1,818	490	1,717	1,346	956	544	5,859	3,987	2,774	1,034
1982	5,034	3,626	2,759	1,252	1,934	1,506	1,146	930	6,968	5,132	3,904	2,182
1983[1]	6,017	4,292	3,133	1,532	2,267	1,955	1,829	1,609	8,284	6,247	4,962	3,140
1984[1]	3,102	1,944			1,832	1,314			4,934	3,258		

[1] Preliminary. [2] Old crop only. [3] Data prior to 1976 are *as of July 1.* *Source: Crop Reporting Board, U.S.D.A.* T.156

Distribution of Corn in the United States In Millions of Bushels

Year Beg. Oct.	Shipments														
	Wet Corn Milling (Grind)	Corn Meal[4]	Corn Flour Etc.	Hominy Grits (Food)	Breakfast Foods[3]	Starch	Glucose & Dextrose	Fuel Alcohol[2]	Total Shipments	Seed	Livestock Feed[5]	Exports (Incl. Grain Equiv. of Pdt's.)	Total Utilization	Domestic Disappearance
1975–6	343	18	15	11	24				482	20	3,603	1,711	5,804	4,093
1976–7	362	17	17	10	25				505	20	3,608	1,684	5,805	4,121
1977–8	398			121					470	20	3,744	1,948	6,282	4,334
1978–9	425			124					601	19.5	4,323	2,133	7,077	4,944
1979–0	455			127					655	20.0	4,519	2,433	7,626	5,194
1980–1	480			160		130	185	75	735	20.2	4,139	2,355	7,230	4,874
1981–2	510			162		125	190	120	811	19.4	4,276	1,967	7,054	5,088
1982–3	540			163		125	190	175	898	14.5	4,635	1,870	7,402	5,532
1983–4[1]	570			160		125	190	200	950	20.0	3,975	1,875	6,800	4,925

[1] Preliminary. [2] Fuel, Industrial & Beverage Alcohol. [3] Assumes sizeable quantities of corn flour are purchased by breakfast food mfg. from the dry milling industry. [4] Regular & degermed. [5] Feed & waste (residual, mostly feed). *Source: Commodity Economics Division, U.S.D.A.* T.155



CORN CASH PRICE CHICAGO

Monthly Average Prices

Average Cash Price of Corn, No. 2 Yellow (15 Days) at Chicago In Cents Per Bushel

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average[1]
1974–5	374	348	347	319	296	290	296	282	289	295	312	299	312
1975–6	274	259	259	262	270	268	268	284	296	296	287	277	275
1976–7	249	233	244	253	254	252	250	241	227	205	178	180	230
1977–8	184	214	219	219	221	236	251	257	251	228	217	213	226
1978–9	222	228	227	229	235	242	253	266	283	300	282	278	254
1979–0	273	259	269	254	265	260	261	270	270	308	336	344	281
1980–1	343	343	354	356	349	348	353	347	341	341	309	272	338
1981–2[2]	261	260	252	263	263	267	278	279	277	267	241	235	262
1982–3[2]	213	238	243	253	274	299	312	311	329	336	367	361	
1983–4[2]	349	350	338	329	328	351							

[1] Weighted average by carlot sales. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.161

Average Cash Price of Corn, No. 2 Yellow at Omaha In Dollars Per Bushel

Crop Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1979–80	2.37	2.32	2.36	2.26	2.33	2.23	2.32	2.43	2.50	2.81	2.98	3.01	2.49
1980–81	3.16	3.34	3.30	3.29	3.18	3.17	3.24	3.24	3.19	3.15	2.79	2.51	3.13
1981–82	2.44	2.39	2.37	2.47	2.45	2.48	2.61	2.65	2.65	2.54	2.23	2.23	2.46
1982–83	2.12	2.35	2.37	2.42	2.62	2.82	3.09	3.10	3.11	3.18	3.39	3.32	2.82
1983–84	3.23	3.24	3.17	3.11	3.03	3.25							

Source: Economic Research Service, U.S.D.A. T.161a

CORN

Weekly Outstanding Export Sales & Accumulated Exports—U.S. Corn In Thousand Metric Tons

Marketing Year	1983/84		1982/83		1981/82		1980/81	
Week Ending	Outst. Sales	Accum. Expts.	Outst. Sales	Accum. Expts.	Outst. Sales	Accum. Expts.	Outst. Sales	Accum. Expts.
Oct. 4	17173.7	376.1	112017	763.0	12460.5	767.1		
11	16928.3	1285.6	10914.3	1680.2	12119.6	1890.8		
18	16780.9	2317.5	10608.7	2506.3	11395.2	3403.4		
25	16761.6	3534.9	10500.5	3473.2	11123.1	4281.6	24237.9	5108.3
Nov. 1	15754.6	4934.8	9934.2	4557.0	10816.2	5444.7	24863.0	6439.8
8	15158.0	6500.5	10115.0	5777.6	11180.6	6440.4	25904.6	7764.2
15	15263.0	7882.3	10635.0	6953.6	10577.1	7744.5	25422.6	9588.6
22	14401.5	8940.3	10474.7	7941.5	10177.7	8942.2	25197.2	10753.8
29	15186.9	9945.6	9889.2	8941.2	9964.5	9976.3	24907.4	12334.8
Dec. 6	14608.1	11410.4	9712.7	10047.6	9266.1	11244.0	25104.3	13701.8
13	14080.4	12377.8	10306.1	10878.6	9254.7	12331.5	23994.2	15452.8
20	13604.7	13536.0	10173.0	11910.6	8510.1	13301.0	24223.6	16572.9
27	13046.3	14383.9	10311.6	12744.6	8247.5	14076.1	23426.0	17580.0
Jan. 5	12624.6	15161.5	10169.1	13529.6	8371.1	14933.9	22804.0	18829.5
12	12258.1	16321.7	10241.4	14826.5	8380.6	15880.0	22214.6	20138.5
19	11905.0	17246.9	10952.1	15606.6	8054.6	16893.4	21268.8	21416.3
26	11407.2	18179.2	10926.4	16783.4	8041.7	17845.4	20856.6	22829.5
Feb. 2	11131.6	19103.9	11118.9	17798.8	7944.9	18808.6	20405.4	23941.4
9	10868.6	19925.9	10814.1	18996.4	8086.9	19745.8	19997.9	25172.0
16	10954.9	20769.6	10770.3	19981.7	8863.5	20523.7	19056.4	26545.5
23	10533.7	21820.4	10713.1	21143.1	8099.1	21575.7	17975.9	27839.5
Mar. 1	10776.3	22952.4	11035.8	22226.1	9658.2	22686.9	18103.5	29243.2
8	11560.6	23607.3	11137.6	23253.8	10909.3	23828.8	16997.2	30549.3
15	11500.4	24679.7	11013.7	24332.6	10873.6	24833.8	15603.6	32123.8
22	11299.5	25684.5	11100.9	25396.4	10071.8	26128.3	14811.2	33221.1
29	10914.8	26853.5	11477.4	26056.6	9786.6	27243.3	14135.3	34576.5
Apr. 5	10711.3	27879.8	11079.9	26865.5	10006.8	28355.3	12939.9	35972.8
12	10378.5	28768.2	11223.6	28088.8	10050.3	29545.9	12945.4	36915.0
19			11185.6	28928.7	9762.5	30465.6	12252.3	38039.7
26			11013.6	29583.8	9645.1	31750.6	11556.9	39447.9
May 3			10867.3	30462.4	9005.7	32933.0	10931.4	40555.1
10			11021.4	31324.8	8654.2	34239.5	10696.5	41630.8
17			10921.8	32336.0	7887.5	35741.7	10384.9	42871.4
24			10856.5	33463.6	7073.8	37131.8		
31			10573.8	34139.4	6714.7	38205.1	9346.4	45022.2
June 7			10048.2	35130.5	6050.3	39645.1	8839.3	46082.1
14			9923.0	36123.0	5856.8	40394.2	8132.3	47136.6
21			9803.4	36976.4	5508.7	41404.1	7689.5	48080.8
28			9032.7	37698.8	4966.0	42258.1	7184.1	48811.3
July 5			8679.9	38478.8	5025.2	42840.3	6678.8	49650.8
12			8282.9	39257.8	4887.8	43619.6	6008.9	50480.1
19			8015.5	39982.7	5161.3	44297.2	5265.0	51396.2
26			7689.7	40710.5	4933.7	45106.1	5144.8	52212.9
Aug. 2			7438.1	41302.8	4884.4	45780.0	4800.1	52888.8
9			7296.8	41887.0	4484.0	46444.5	4987.4	53672.3
16			6679.1	42542.3	4411.4	47250.5	4781.6	54465.5
23			5649.8	43528.5	4138.1	47966.1	4694.1	55216.8
30			4845.1	44365.7	3749.1	48487.6	4300.2	56018.8
Sept. 6			4154.8	45215.5	3635.1	48924.3	3850.1	57055.5
13			3247.2	46263.3	2962.7	49792.9	3414.7	57913.2
20			2451.1	2214.1	46914.2	50588.7	2178.8	59179.1
27			1862.5	47482.6	1397.7	51350.6	1347.7	60065.0

Source: U.S.D.A. Export Sales Report (U.S.D.A.)

T.161b

Average Price Received by Farmers for Corn in the U.S. In Cents Per Bushel

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average[1]
1980–1	299	310	319	319	322	325	324	324	317	314	287	255	311
1981–2	245	234	239	254	244	246	255	260	257	250	230	215	250
1982–3	198	213	226	236	256	271	295	303	304	313	335	332	268
1983–4	315	317	315	315	311	325							

[1] Weighted average by sales. *Source: Crop Reporting Board, U.S.D.A.*

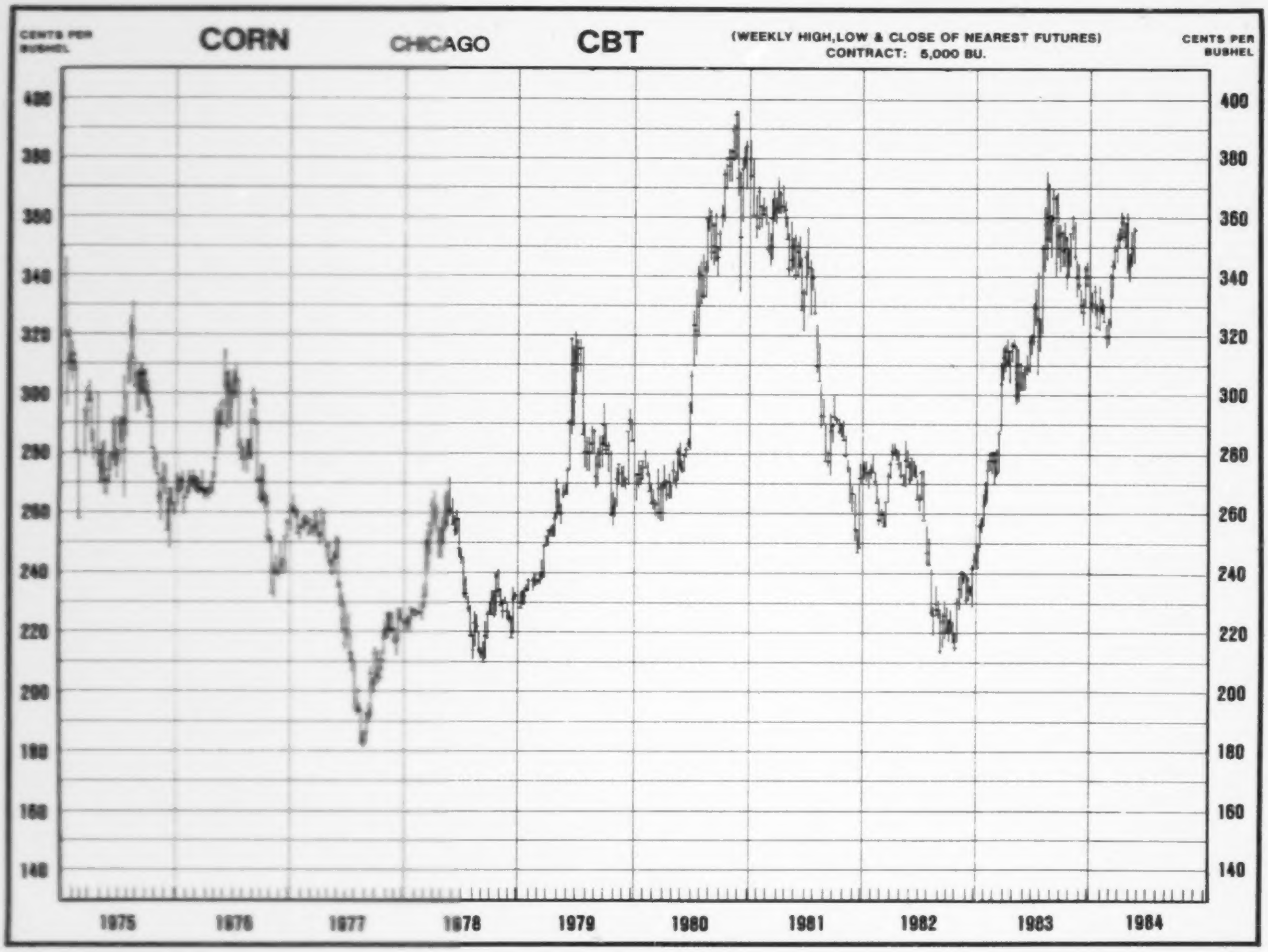
T.160

U.S. Exports[2] of Corn (Including Seed), By Country of Destination In Thousands of Metric Tons

Yr. Begin. October	USSR	Belg. & Luxem.	Canada	Egypt	W. Germany	Greece	Israel	Italy	Japan	Mexico	Netherlands	Norway	Spain	United Kingdom	Total All Exports
1977-8		1,601	232	731	2,501	1,046	395	2,065	8,610		2,870	57	1,670	2,034	49,156
1978-9		2,023	364	617	1,435	1,186	258	1,503	8,979		2,193	63	1,747	1,990	53,903
1979-0		1,622	597	874	1,521	1,119	562	2,072	11,193		2,108	36	2,503	1,828	61,417
1980-1	4,947	2,065	551	1,129	1,264	718	547	1,859	12,586	3,832	1,773	65	2,651	1,395	59,368
1981-2[1]	7,499	1,974	342	1,349	1,136	734	403	655	10,595	557	1,428	57	4,003	1,091	49,693
1982-3[1]	3,082	2,303	263	1,516	332	221	420	89	13,187	4,013	421	69	2,134	755	47,210

[1] Preliminary. [2] Exports of grain only. Does not include corn exported under the food for relief or charity program. *Source: Foreign Agricultural Service, U.S.D.A.*

T.165



Volume of Trading of Corn Futures at Chicago In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	1,755	1,599	3,405	3,255	3,159	3,147	2,495	2,663	1,989	2,729	2,723	1,716	30,635
1979	1,734	2,281	2,739	3,302	3,751	5,705	5,806	3,999	3,135	4,522	3,794	2,592	43,359
1980	3,287	3,227	3,493	3,690	3,265	3,362	6,722	7,310	6,287	6,609	6,455	6,027	59,735
1981	4,848	4,495	5,036	5,222	3,867	4,785	5,459	5,019	3,626	3,127	3,913	3,978	53,375
1982	2,802	3,390	3,634	3,355	2,754	3,538	3,122	3,552	3,127	3,239	4,634	2,594	39,741
1983[1]	3,638	3,114	5,355	4,440	3,943	4,511	5,627	7,431	5,882	5,180	5,734	3,518	59,623
1984[1]	3,518	3,866	4,248										

[1] Preliminary. *Source: Chicago Board of Trade*

T.164

CORN

Month End Open Interest of Corn Futures at Chicago In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	680.9	720.3	784.2	810.7	859.6	951.3	898.7	889.8	860.0	899.8	857.3	836.2
1980	838.9	799.0	789.8	787.7	766.7	721.6	1,048.8	1,382.4	1,398.0	1,587.9	1,575.5	1,315.0
1981	1,216.5	1,107.5	1,002.4	846.5	737.5	572.6	568.8	637.8	637.7	724.7	674.6	630.7
1982	708.0	625.6	650.0	610.0	594.5	552.6	581.8	596.6	594.7	663.5	712.1	657.8
1983	776.9	778.5	872.5	832.4	760.0	727.2	792.5	1,127.1	1,134.4	1,163.4	1,138.0	1,062.1
1984	1,022.3	964.0	1,034.3									

Source: Chicago Board of Trade T.163

High, Low & Closing Prices of May Corn Futures at Chicago In Cents per Bushel

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1979	High	—	271	286½	281¾	265½	249	243½	256¼	251½	247¾	244¾	250¾	252	260	270¾	286½
	Low	—	251¾	251½	263¼	246¼	230½	232¼	241½	242	237¾	236¼	242¼	242½	249¼	255½	230½
	Close	—	256	283	266½	249	236¼	243	249¾	246¼	240½	243½	246¾	251½	259¼	261¼	—
1980	High	279	287¼	295	336	341½	307½	306¼	318	307½	305½	302¾	294	280	276	277	341½
	Low	272½	275¾	279½	285½	288	283½	287¾	286	287¼	294¼	277	276	256½	257¾	265¼	256½
	Close	278½	287¼	287	319	292	303½	303¼	293¼	302½	301	287¾	276¼	258¼	265¾	271¾	—
1981	High	325	322	325	318	358	369½	379	394	418	416½	393	380	369	372½	363½	418
	Low	311	308¾	311¾	307	318¼	341½	357	358	385¼	354¼	362½	365	350¼	355½	339	307
	Close	312¾	312¾	313	318	356¾	368¾	365¼	385¾	415¾	385¼	364¾	369¾	364¾	361	341	—
1982	High	398¼	410¾	398	385¾	395½	370¾	338¼	338¼	320½	297½	287½	291	275½	283¼	277¼	410¾
	Low	385	385¼	371¼	360¾	364¼	323	310	315½	290¾	261½	277½	269¼	265¼	274	267½	265¼
	Close	397¾	390½	380¾	366	370¾	333¾	318½	318½	291	281	285½	270	274¼	276	268¾	—
1983	High	317½	322½	313½	307	294¼	281	259¼	253	258	255	278	292	315½	318¾	319¼	322½
	Low	310	313¼	303	291¾	274½	250¾	243½	236¼	242¾	242¾	251	273	282¼	304¼	297¼	236¼
	Close	316	313¼	303	292¾	276½	255¾	248	236¼	247¾	253	277	281½	312¾	317¼	311	—
1984	High	325	324½	320	301½	347	390	385½	359¾	361½	346	338¾	336	357¼			
	Low	297½	312¼	296¼	286¼	285	341½	345½	337	335¾	329½	324¾	320	331			
	Close	317¾	316¼	297¼	289¾	342½	374½	358½	341¼	340¼	340¼	332¾	332½	353¼			
1985	High	312¾															
	Low	300															
	Close	309¼															

Source: Chicago Board of Trade T.162

Corn Price Support Data in the United States

Year Begin. Oct. 1	National Avg. Loan Rate	Grain Reserve Loan Rate	Target Price	Placed Under Loan	Redemptions	Resealed	Total Deliveries[2]	Stocks at Close of Mkt. Year (Sept. 30) CCC Inventory	Under CCC Loan	Farmer Owned Reserve	"Free" Stocks	Total Stocks	CCC Inventory — As of Dec. 31 — CCC Owned	Under CCC Loan
	¢ Bush.			Millions of Bushels										
1979–0	210	—	220	557	527		—	256.3	82.6	636.4	642.2	1,617.5	99.7	801.0
1980–1	225	240	235	840	742		42	237.8	100.8	185.4[4]	510.0	1,034.0	256.4	966.0
1981–2[1]	240	255	240	1,977	392		45	302.4				2,182.4	248	1,234
1982–3[1]	255	290	270	1,585	0		0					3,140.3	429	2,400
1983–4[1]	265		286									545.0		

[1] Preliminary. [2] Includes "delivered to CCC" from original program and deliveries from reseal program and over-deliveries as determined by weight of farm-stored grain when delivered to CCC. [3] Less than 500,000 bushels. [4] Called Reserve Corn under extended loan. *Source: Agricultural Stabilization and Conservation Service, U.S.D.A.* T.159

Corn Under Price Support through the End of the Month (Cumulative Total from Current Season's Crop) In Millions of Bushels

Crop Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1979–0	2.2	17.3	106.1	206.3	347.8	409.5	461.7	488.8	539.1	545.8				
1980–1	2.3	44.6	145.0	386.0	746.7	795.2	816.0	830.6	836.0	838.1				
1981–2	13.5	81.9	418.7	1,049	1,642	1,826	1,903	1,940	1,951	1,962				
1982–3	15.5	76.2	334.5	870.2	1,369	1,505	1,551	1,561	1,567	1,572				
1983–4	.4	14.6	58.1	98.3	138.0	149.1								

Source: U.S. Department of Agriculture T.158

Supply & Distribution of Corn Oil In Millions of Pounds

Year Beginning Oct.	Supply				Disappearance									
					Food Uses					Non-Food Uses				
	Production	Imports	Stocks Oct. 1	Total Supply	Shortening	Margarine	Salad & Cooking Oil	Other	Total Food Uses	Foots & Loss	Other	Total Non-Food Uses	Total Domestic Disappearance	Total Exports & Shipments
1971–2	499	—	58	557	1	190	203	10	403	35	1	36	439	49
1972–3	523	—	70	593	3	207	231	6	447	44	1	45	492	44
1973–4	528	1	57	586	6	198	198	2	404	45	1	46	450	68
1974–5	465	2	68	535	7	185	164	1	356	42	—	43	399	84
1975–6	644	1	52	697	4	212	297	1	514	44	1	45	559	98
1976–7	669	10	41	720	3	235	303	2	543	37	1	38	605	59
1977–8	695	3	46	744	4	243	288	—	510	45	1	46	580	88
1978–9	737	—	73	810		223	314						619	121
1979–0	791	—	70	861		222	335						654	141
1980–1	864	—	66	930		217	383						673	181
1981–2[1]	872	—	76	948		217	357		593				689	206
1982–3[1]	983	—	53	1,036		217	395		637				722	224
1983–4[2]	1,022	—	89	1,111									765	270
1984–5														

[1] Preliminary. [2] Forecast. *Source: Economic Research Service, U.S.D.A.* T.166

Crude Corn Oil Production in the United States In Millions of Pounds

Crop Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1971–2	42.4	40.7	33.4	38.7	38.7	43.5	40.0	46.1	45.7	43.3	43.5	43.2	499
1972–3	44.1	40.3	40.1	42.6	41.7	46.3	40.6	47.5	45.9	45.8	44.3	43.8	523
1973–4	45.2	42.4	43.1	45.1	41.8	45.4	46.5	46.8	43.8	40.5	44.0	43.0	528
1974–5	41.2	40.1	40.1	37.0	34.6	38.6	37.6	40.6	38.9	40.5	35.2	40.3	465
1975–6	39.8	40.3	35.4	55.2	53.8	55.1	59.5	61.7	59.1	58.9	65.8	59.6	644
1976–7	62.0	50.4	51.3	48.1	49.0	59.2	55.6	58.1	57.9	64.0	59.3	53.7	668.6
1977–8	58.9	58.0	50.1	54.9	51.6	58.7	57.1	68.0	64.7	60.5	59.7	63.8	69[illegible].5
1978–9	65.4	59.8	55.8	47.6	54.9	69.4	67.4	69.7	60.6	61.5	63.9	60.3	736.3
1979–0	61.8	63.3	63.0	62.3	60.0	70.7	64.3	68.3	65.1	66.2	69.9	76.2	791.1
1980–1	80.6	68.0	59.0	65.8	63.6	76.2	69.6	74.3	76.1	76.2	76.4	77.8	863.6
1981–2	81.4	69.2	66.5	56.7	64.9	76.4	71.6	77.1	73.9	76.5	79.3	78.0	871.5
1982–3[1]	79.2	72.6	78.4	78.9	73.1	88.2	79.8	85.9	83.6	82.7	92.0	88.2	982.6
1983–4[1]	87.0	85.7	83.2	92.1	87.5	91.3							
1984–5													

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.167

Corn Oil Spot Price, Crude, F.O.B. Midwest Mills (Tank Cars) In Cents Per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1971–2	17.8	19.0	18.0	18.0	17.3	17.3	17.0	17.5	16.3	15.0	14.5	15.3	16.9
1972–3	16.0	15.8	16.5	17.8	17.3	17.8	17.5	19.0	21.0	20.8	35.0	23.0	19.8
1973–4	24.0	25.5	32.0	39.0	45.0	39.5	33.0	38.5	38.0	38.0	47.5	38.0	36.5
1974–5	45.0	45.0	42.0	44.0	40.5	39.0	37.0	27.0	26.5	29.5	31.0	28.0	36.2
1975–6	29.0	28.5	28.5	32.5	28.5	26.5	23.3	19.8	22.0	26.0	23.5	27.0	26.3
1976–7	27.1	27.5	26.0	28.0	36.0	36.0	34.5	35.5	31.0	27.5	23.5	23.2	29.7
1977–8	26.5	31.5	35.0	40.0	44.0	43.0	36.5	35.3	33.0	33.3	31.5	35.5	35.4
1978–9	34.0	35.0	31.0	35.0	34.0	33.3	32.1	33.0	30.0	31.0	32.3	32.5	32.8
1979–0[1]	32.8	29.9	33.3	27.5	29.0	26.0	20.0	23.0	22.0	27.3	29.8	28.0	27.4
1980–1[1]	28.0	27.5	28.0	26.3	25.0	23.8	25.5	24.4	24.5	25.8	22.3	21.5	25.2
1981–2[1]	20.0	21.0	25.0	24.0	29.0	25.0	25.0	24.0	23.5	23.0	20.5	21.0	23.4
1982–3[1]	23.0	23.8	24.0	22.5	24.5	21.5	21.0	22.5	22.0	20.0	25.0	36.0	23.8
1983–4[1]	27.5	28.0											
1984–5													

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.168

Cotton

The 1983 U.S. cotton crop totaled 7.7 million bales, down 36 percent from the 1982 crop. Production consisted of 7.63 million bales of Upland cotton and 90.5 thousand bales of American–Pima. This was the smallest crop since 1967 and the second lowest production since 1895. An estimated 7.33 million acres were harvested of the 7.96 million planted, 25 percent below acreage harvested in 1982. Abandonment was 7.9 percent of planted acreage versus the unusually high 14.2 percent in 1982. Acreage loss in Texas was about ½ million acres compared with about 1½ million in 1982. The beltwide average yield per harvested acre was 506 pounds, compared with the record high 590 pounds in 1982.

The 1983 U.S. Upland cotton crop averaged 34.3 thirty-seconds inches in length, according to the Cotton Division, Agricultural Marketing Service, USDA. This was down slightly from the previous year but the second longest staple length average since records began in 1940. Strict Low Middling (Grade 41) was the predominant grade of Upland cotton ginned from the 1983 crop, accounting for about 29 percent of ginnings, the largest proportion since 1978, versus 27 percent in 1982 and 21 percent in 1981. Staples 34 and 35 (1-1/16 and 1-3/32 inches) comprised 48 percent of ginnings, up from 40 percent the previous year.

U.S. cotton supply for the 1983/84 season totaled about 15.7 million bales, considerably less than the 1982/83 supply of 18.7 million bales, because of the low production figure. U.S. cotton production in 1983 represented about 11 percent of the estimated world production of 67.5 million bales, down from 18 percent a year earlier.

Domestic consumption of cotton increased about 20 percent in 1983. The 1983 cotton textile trade deficit (net imports) was the equivalent of 1.9 million bales, and mill use of cotton reached about 5.9 million. Therefore, domestic consumption hit 7.8 million bales—the highest since 1973. While the increase in mill use during 1983 was typical for a recovery year, the rise in the cotton textile trade deficit was unprecedented. From 1982 to 1983, the deficit grew from 1.3 million bales to 1.9 million—a 42 percent change. Cotton textile imports have probably encouraged an increase in domestic cotton consumption but a decrease in cotton's share of mill use. Cotton accounted for about 23.1 percent of U.S. mill use in 1983—a record low—and cotton's share of domestic fiber consumption fell to 27 percent. The less favorable cotton-polyester price ratio and an influx of cotton textile imports contributed to the changes in market share. Cotton prices averaged 10 cents a pound above polyester prices during 1983 compared with 1982 when cotton was priced an average of 4 cents under polyester. Yet, the daily rate of mill consumption in the first half of the 1983/84 season exceeded that for the same period in 1982/83.

A large increase in U.S. cotton export prospects for the 1983/84 season was attributed to severe crop failures in major cotton producing nations. Pakistan, India, the USSR and Brazil suffered crop damage, enabling the U.S. to supply cotton in larger quantities to traditional markets as well as to Pakistan and the USSR. In Late April 1984, U.S. 1983/84 season exports were estimated at 7.2 million bales, 30% above the 1982/83 total of 5.2 million. For the third consecutive year, China purchased virtually no U.S. cotton. A record large Chinese crop of around 21 million bales was produced in 1983/84. With domestic consumption estimated at 17.5 million bales, the Chinese government offered as much as 500,000 bales for export. Both the U.S. cotton export outlook and prices improved despite a reported 10 percent gain in the trade-weighted value of the dollar, using cotton exports as the weights, during the first 5 months of the season. The USSR, the second largest producer and exporter in the world for previous seasons, had accumulated U.S. exports of 132.7 thousand running bales as of mid-April 1984 versus an insignificant figure for the year earlier date. Meanwhile, Pakistan's production was estimated to have declined 1.5 million bales to 2.2 million; Egyptian production by about 300,000 bales; and Brazilian production by about 500,000 bales. Other smaller producing countries, such as the Ivory Coast, Senegal, Israel, Ecuador, and Spain, also produced less cotton in 1983/84 than during the previous season. While these declines were partially offset by increases elsewhere, the net effect was weak competition for U.S. exports.

In mid-May, 1984, the USDA projected 1984 U.S. cotton production at 11.5 million bales versus 7.7 million in 1983 and total supply for the 1984/85 season at 14.4 million bales compared with 15.7 million for 1983/84. Domestic mill consumption of cotton was projected at 5.7 million bales compared with 5.9 million in 1983/84 and exports were expected to decrease from 7.0 million bales to 5.5 million in 1984/85. The July 31, 1985 carryover was projected at 3.2 million bales versus an estimated 2.9 million for July 31, 1984. This was a considerable decrease from 7.9 million a year earlier and 6.6 million bales two years ago.

U.S. Government Activities

The 1984 upland cotton program requires a 25 percent acreage reduction in exchange for target price and loan rate protection. The 1984 target price is 81 cents a pound, and the loan rate for Upland cotton is 55 cents per pound, basis Strict Low Middling 1-1/16 inch, micronaire 3.5–4.9 at average U.S. location. Because the deficiency payment rate is based on the 1984 average farm price, each month with prices below 70 cents makes a large deficiency payment rate more likely.

The USDA on March 23, 1984 announced that 71.10 percent (11.056 million acres) of the 15.549 million cotton base acreage was enrolled in the 1984 25 percent reduction program (ARP). There is no Payment-in-kind (PIK) provision under the 1984 program. Program participation by at least two-thirds of the cotton base would be consistent with an expected deficiency payment rate of between 15 and 20 cents a pound and the $50,000 dollar payment limitation. However, even with participation of 100 percent, planted acreage could reach 11.6 million, nearly 1 million above previous reported intentions.

Futures Market

Cotton futures are actively traded on the New York Cotton Exchange.

Cotton World Supply and Demand In Thousands of 480-lb. Bales

Yr. Begin. Aug. 1	Beginning Stocks				Production				Consumption				Exports			
	US	USSR	PR China	World Total	US	USSR	PR China	World Total	US	USSR	PR China	World Total	US	USSR	PR China	World Total
1977–8	2,928	2,800	2,800	21,564	14,389	12,470	9,400	63,911	6,509	9,000	11,000	59,717	5,484	4,160	100	19,140
1978–9	5,347	2,465	2,700	26,313	10,856	11,907	9,950	59,634	6,352	9,075	11,800	62,002	6,180	3,756	50	19,756
1979–0	3,958	1,895	3,000	24,185	14,629	12,833	10,100	65,204	6,506	9,100	13,500	65,339	9,229	3,770	0	23,100
1980–1	3,000	2,154	3,590	23,939	11,122	13,498	12,400	64,807	5,891	9,150	15,300	65,933	5,926	4,070	0	18,675
1981–2	2,668	2,585	4,234	24,084	15,646	13,277	13,600	70,782	5,264	9,150	15,700	65,536	6,567	4,295	0	20,244
1982–3[1]	6,632	2,527	4,228	28,716	11,963	11,939	16,500	67,533	5,513	9,200	16,200	67,648	5,207	3,300	100	18,499
1983–4[2]	7,937	2,366	5,408	28,998	7,755	12,500	21,000	67,402	5,920	9,300	17,200	69,249	6,928	3,200	600	18,816

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.168a

World Production of Cotton In Thousands of Bales[3]

Year Begin. Aug. 1	Argentina	Brazil	China	Egypt	India	Iran	Mexico	Pakistan	Israel	Sudan	Colombia	Turkey	United States	USSR	World Total
1973–4	585	2,456	11,700	2,258	5,530	920	1,500	3,037	173	1,090	620	2,365	13,300	11,100	63,637
1974–5	790	2,440	11,500	2,018	5,950	1,095	2,230	2,925	230	1,015	700	2,760	11,525	12,250	64,713
1975–6	645	1,800	10,700	1,762	5,350	640	910	2,370	225	500	560	2,215	8,500	11,730	54,321
1976–7	740	2,510	10,000	1,828	4,950	720	1,045	2,006	247	735	685	2,190	10,650	12,050	57,487
1977–8	1,015	2,125	9,450	1,840	5,680	820	1,627	2,651	295	915	645	2,650	14,525	12,700	63,836
1978–9	800	2,530	10,000	2,022	6,190	610	1,570	2,183	365	640	373	2,200	10,856	11,830	59,482
1979–0	667	2,629	10,158	2,221	6,274	458	1,509	3,343	346	523	573	2,200	14,629	12,410	64,938
1980–1	384	2,857	12,433	2,428	6,090	290	1,620	3,282	359	441	531	2,290	11,122	13,165	64,527
1981–2	696	3,125	13,632	2,291	6,473	338	1,440	3,438	420	706	406	2,244	15,641	12,975	70,765
1982–3[1]	520	2,971	16,525	2,117	6,320	427	840	3,775	399	944	153	2,241	11,963	11,950	67,533
1983–4[2]	827	2,641	19,830	1,875	6,120	427	1,020	2,600	369	950	241	2,310	7,725	13,000	67,211

[1] Preliminary. [2] Estimate. [3] U.S. is in running bales (500 lbs.); all others are 478 pound net weight bales. *Source: International Cotton Advisory Committee* T.169

World Consumption[3] of All Cottons in Specified Countries In Thousands of Bales (478 Pounds Net[2])

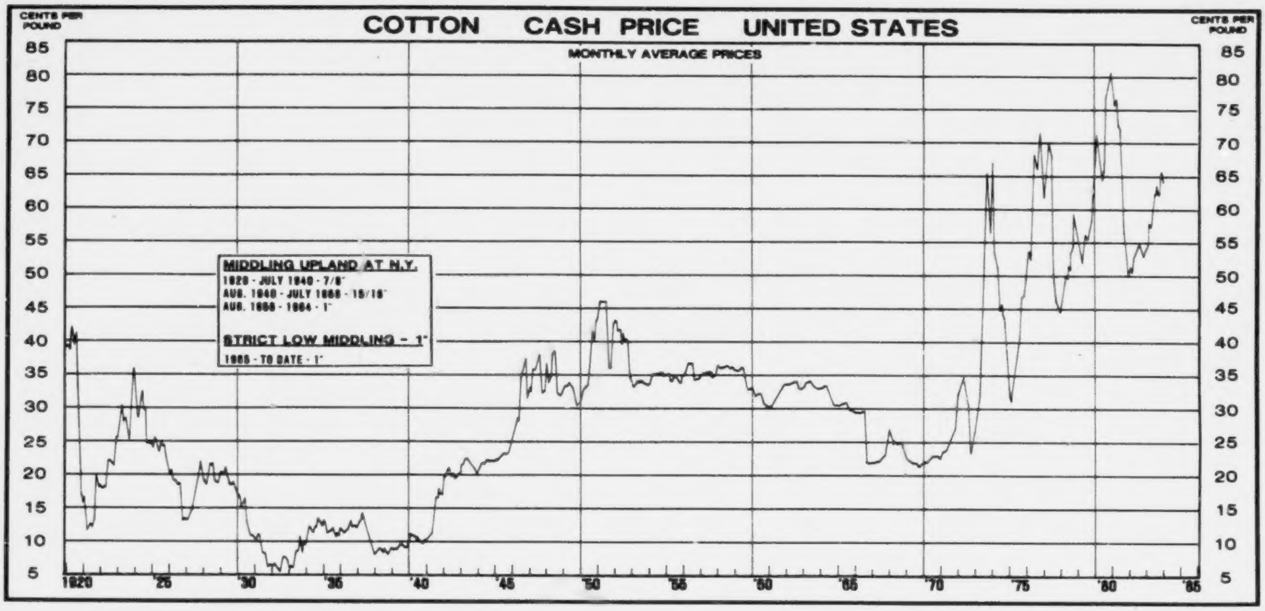
Yr. Beg. Aug. 1	Argentina	Brazil	China	Poland	France	W. Germany	India	Italy	Japan	Mexico	Pakistan	Un. Kingdom	United States	USSR	World Total
1973–4	520	1,750	12,000		1,077	1,096	5,865	898	3,650	830	2,485	560	7,500	8,600	62,183
1974–5	513	1,892	11,800	677	932	962	5,785	828	2,900	820	2,020	510	5,885	8,700	58,219
1975–6	538	2,041	10,700	697	931	1,022	6,100	901	3,250	835	2,150	494	7,300	8,750	61,043
1976–7	538	2,091	11,400	697	957	962	5,500	923	3,150	760	1,800	491	6,702	8,750	60,594
1977–8	478	2,241	12,100	697	846	807	5,320	841	3,000	740	1,900	415	6,514	8,800	60,825
1978–9	503	2,440	12,700	727	822	777	5,626	979	3,300	760	1,950	447	6,352	8,888	63,005
1979–0	468	2,589	13,444	782	846	789	5,925	1,047	3,400	757	1,972	400	6,506	8,916	65,320
1980–1	385	2,526	14,938	752	767	792	6,314	971	3,285	759	2,102	220	5,891	8,971	66,149
1981–2	359	2,619	15,834	697	743	813	5,809	994	3,423	708	2,351	207	5,264	8,984	65,740
1982–3[1]	443	2,639	16,433	689	765	928	6,157	1,000	3,275	630	2,549	207	5,503	9,039	67,720
1983–4[4]	485	2,650	17,200	675	735	950	6,373	950	3,115	500	2,567	220	6,000	9,100	69,290

[1] Preliminary. [2] Except for the U.S. which are in running bales. [3] Includes estimates for hand spinning in some countries. Excludes cotton burned or otherwise destroyed. [4] Estimate. *Source: International Cotton Advisory Committee* - T.173

Consumption of American and Foreign Cotton in the United States In Thousands of Bales[1]

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1973–4	567	543	706	564	509	712	592	587	679	563	546	582	7,150
1974–5	515	489	575	432	343	469	395	400	525	455	477	527	5,602
1975–6	505	531	683	550	624	570	559	712	542	552	692	445	6,965
1976–7	524	626	528	501	582	510	528	653	507	507	616	395	6,477
1977–8	494	606	512	505	562	493	501	620	484	483	575	383	6,218
1978–9	459	569	482	595	435	603	471	506	584	484	489	503	6,180
1979–0	472	482	630	482	436	604	507	513	622	496	478	487	6,209
1980–1	443	456	597	458	475	435	446	539	435	441	531	385	5,641
1981–2	429	517	448	403	400	378	398	493	410	392	460	317	5,038
1982–3[2]	386	474	416	391	425	404	430	549	431	441	543	369	5,259
1983–4[2]	453	560	459	446	468	472							

[1] American cotton, running bales; foreign cotton, equivalent 500 lb. bales. [2] Preliminary. *Source: Bureau of the Census* T.188



Average Spot Cotton Prices,[2] C.I.F. Northern Europe In Cents Per Pound (Equivalent U.S. ¢/Lb.)

Crop Year (Aug.-July)	M 1"		SM 1¹/₁₆-³/₃₂"										SM 1⅛"	
	U.S. Orleans/ Texas	Pakistan N.T. Sind	Guatemala	U.S. Memphis Terr. SM	Greece SM	Egypt Giza67 FG	Mexico SM	Nicaragua SM	Syria SM	USSR Pervyi ³¹/₃₂ MM	Iran	Turkey Izmir (12 MIR)	U.S. Calif.	Uganda BP52
1975	44.34	42.06		59.65	67.93		55.59	51.19	55.87	53.21	53.82	54.01	61.28	67.55
1976	77.74	N.Q.	79.14	79.88	87.24		79.26	77.12	78.15	78.11	78.50	77.68	78.98	91.73
1977	65.81	59.50	64.72	72.31	70.04		73.87	68.74	74.25	70.60	72.02	76.53	75.27	102.25
1978	63.23		75.23	72.52	83.09		72.94	70.21	72.08	72.55	75.10	73.46	77.99	N.A.
1979-80	75.36	75.41	83.63	87.49	84.00	136.37	85.86	86.13	83.50	85.89	80.77	90.25	90.69	N.A.
1980-81	89.14	84.94	93.47	101.23	83.80	137.66	94.91	92.46	101.00	92.80	N.Q.	96.65	101.85	N.A.
1981-2	66.76	65.65	72.87	76.30	81.00	115.73	75.28	72.17	79.82	73.02	N.Q.	77.55	79.79	N.A.
1982-3[1]	68.11	65.59	76.14	77.94	85.74	110.07	76.39	75.70	81.10	71.00		83.44	84.99	
Aug. '83	75.38	73.69	89.00	88.94	97.44	120.06	92.06	88.25	N.A.	N.Q.		92.13	99.94	
Sept. '83	75.20	74.20	87.45	88.15	95.55	120.05	91.05	86.90	N.A.	N.Q.		92.30	98.05	
Oct. '83	73.88	74.13	86.25	88.06	90.13	N.Q.	90.94	86.13	88.50			90.75	97.13	
Nov. '83	76.63	78.13	88.31	88.81	90.88	N.Q.	90.63	87.94	89.00			93.25	97.81	
Dec. '83	79.88	79.50	89.38	89.25	94.94	135.01	88.50	88.84	89.50			98.94	98.25	

[1] Preliminary. [2] Generally for prompt shipment. *Source: International Cotton Advisory Committee* T.172

Supply and Distribution of All Cotton in the United States In Thousands of (480-Lb. Net Weight) Bales

Crop Year Beginning Aug. 1	Supply												Distribution		
	Carryover, Aug. 1						Ginnings								
	Privately Owned														
	At Mills	In Public Storage	Elsewhere	Total	CCC Held	Total Stocks	Current Crop[2] Less Ginnings	New Crop[3]	Total[4]	Imports	City Crop	Total	Mill Consumption	Exports	Total
1975-6	1,132	4,074	275	4,511	924	5,481	8,151	47	8,198	92	5	13,776	7,250	3,311	10,561
1976-7	1,211	2,233	150	3,994	110	3,594	10,300	85	10,385	38	54	14,073	6,674	4,784	11,458
1977-8	1,054	1,791	75	2,920	316	2,920	13,933	144	14,077	5	0	17,002	6,483	5,484	11,967
1978-9	1,120	3,806	400	4,057	1,232	5,326	10,405	72	10,477	4	0	15,807	6,352	6,180	12,532
1979-0	928	2,604	250	3,145	635	3,782	14,190	200	14,390	5	0	18,177	6,506	9,229	15,735
1980-1	955	1,822	250	2,485	542	3,027	10,627	44	10,671	28	1	13,897	5,891	5,926	11,817
1981-2	883	1,688	25	1,943	652	2,595	15,106	40	15,146	26	0	17,767	5,264	6,567	11,831
1982-3[1]	830	5,269	300	2,640	3,759	6,399	11,486	2	11,488	20	0	17,907	5,513	5,207	10,720
1983-4[5]	755	6,656	150	2,795	4,766	7,561	7,500			14	0	15,075	5,820	6,780	12,600

[1] Preliminary. [2] Less ginnings prior to Aug. 1. [3] Ginnings prior to Aug. 1 end of season. [4] Includes inseason ginnings. [5] Estimate. *Source: Economic Research Service, U.S.D.A.* T.170

Purchases Reported by Exchanges in Designated U.S. Spot Markets In Running Bales

Year Beginning August 1	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1979	284,889	229,192	529,677	1,499,688	2,498,483	2,901,588	1,068,127	642,337	333,008	139,875	123,119	110,892	10,360,875
1980	107,920	92,769	499,579	961,488	1,565,792	1,143,395	878,913	576,871	268,136	243,096	142,885	121,300	6,602,144
1981	115,017	201,791	468,124	821,205	1,606,620	2,049,345	1,163,850	877,323	403,824	449,948	277,553	420,336	8,854,936
1982	122,082	150,629	375,083	717,258	1,160,522	1,139,575	793,071	829,016	356,510	434,794	478,658	247,150	6,804,348
1983	236,607	270,662	688,534	1,022,458	1,639,279	1,697,601	750,963	424,475					

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[1] Purchases are for 10 markets; commencing February 1980 purchases are for nine markets; and commencing March 28, 1983 purchases are for eight markets. *Source: Agricultural Marketing Service: U.S.D.A.* T.190a

Average Price of Strict Low Middling, 1 1/16″, Cotton at Designated U.S. Markets ¢/Lb. (Net Weight)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1977–8	52.54	49.30	49.06	47.98	48.42	51.05	52.89	55.01	54.72	57.59	57.35	56.99	52.74
1978–9	59.78	60.04	64.08	65.65	64.39	61.48	60.59	58.70	58.05	60.90	63.38	61.87	61.58
1979–0	62.08	62.15	62.88	63.40	66.20	72.40	80.66	79.24	79.05	78.27	72.41	79.01	71.48
1980–1	85.60	87.51	85.78	87.05	87.23	85.11	83.30	81.52	81.15	78.46	78.12	75.08	82.99
1981–2	66.44	60.81	60.63	57.47	55.11	57.82	57.26	59.73	62.03	62.44	61.10	64.96	60.48
1982–3	60.38	58.98	58.58	58.20	59.65	60.16	61.72	66.05	65.33	66.88	70.74	70.27	63.08
1983–4	72.93	71.68	72.01	73.41	73.04	70.55							

Note: Grade 41. *Source: Department of Agriculture* T.190

Average Spot Cotton, 1 3/32″, Price (SLM) at Designated U.S. Markets In Cents Per Pound (Net Weight)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average	1 1/32″	1″
1977–8	52.72	49.48	49.24	48.16	48.65	51.28	53.12	55.24	54.95	57.82	57.58	57.22	52.96	51.27	48.26
1978–9	60.01	60.27	64.31	65.94	64.68	61.77	60.88	59.03	58.44	61.30	63.79	62.26	61.89	59.92	55.24
1979–0	62.47	62.54	63.28	63.81	66.58	72.78	81.05	79.63	79.44	78.66	72.80	79.40	71.87	69.53	63.39
1980–1	86.00	87.91	86.18	87.45	87.63	85.57	83.70	81.92	81.55	78.86	78.52	75.48	83.39	80.95	75.70
1981–2	66.84	61.22	61.08	57.91	55.52	58.24	57.70	60.12	62.41	62.82	61.48	N.A.	60.89	58.28	54.13
1982–3	60.76	59.36	58.97	58.57	60.02	60.53	62.09	66.43	65.72	67.31	71.20	70.73	63.47	61.17	56.41
1983–4	70.52	69.29	69.49	70.82	70.44	68.03									

Source: Agricultural Marketing Service, U.S.D.A. T.191

Average Spot Prices of U.S. Cotton,[1] 1 1/16 inches—(SLM) at Designated Markets In Cents Per Pound

Yr. Begin. Aug. 1	Atlanta	Augusta	Charleston	Dallas	Fresno	Galveston	Greenville	Greenwood	Houston	Little Rock	Lubbock	Memphis	Montgomery	Phoenix	Average
1977–8	—	53.81	—	50.53	56.67	—	53.33	52.75	51.58	—	50.04	52.75	53.24	52.71	52.74
1978–9	—	62.50	—	58.33	67.66	—	62.09	61.84	59.45	—	58.27	61.68	61.92	61.98	61.58
1979–0	—	73.92	—	66.91	73.76	—	73.24	72.73	—	—	66.43	72.55	72.57	71.98	71.48
1980–1	—	85.21	—	80.65	82.80	—	84.54	84.30	—	—	79.66	83.81	84.28	81.70	82.99
1981–2	—	61.87	—	58.32	61.02	—	61.57	61.34	—	—	57.96	61.00	61.34	59.93	60.48
1982–3	—	—	—	61.62	64.49		63.50	63.50	—	—	60.84	63.33	63.35	63.17	63.08
1983–4															

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[1] Mixed Lots, Net Weight, uncompressed in warehouse. *Source: Agricultural Marketing Service, U.S.D.A.* T.177

Avg. Price[1] Received by Farmers for Upland Cotton in the U.S. In Cents Per Pound

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[1]
1977–8	58.3	59.1	53.6	52.1	48.7	49.1	51.4	51.1	52.2	53.7	54.8	56.5	52.1
1978–9	57.4	56.2	59.6	61.1	59.0	57.0	55.6	53.5	54.7	56.0	58.8	61.9	58.1
1979–0	59.2	57.3	61.2	61.0	59.8	60.9	64.9	62.9	61.0	63.6	62.2	71.5	63.1
1980–1	73.7	74.0	75.3	77.6	80.9	76.6	70.8	71.9	72.7	72.5	71.2	70.4	74.4
1981–2	65.0	58.1	63.2	61.1	51.5	50.3	49.1	50.4	54.3	55.8	58.1	59.9	54.0
1982–3	52.8	55.5	59.8	59.9	57.3	57.0	57.7	62.2	60.4	63.6	62.6	67.1	57.6
1983–4	67.0	63.1	64.0	66.8	67.3	62.7	65.7	69.3					

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[1] Weighted average by sales. *Source: Crop Reporting Board, U.S.D.A.* T.187

COTTON

Cotton Government Loan Program in the United States

Crop Yr. Beginning Aug.	Acreage		Loan Rate		Supply & Distribution of Gov't Controlled Cotton						
					Stocks—Aug. 1						
	Prospective Planting Intentions	Harvested	Avg. at Spot[2] Mkts.	Target Price	Gov't. Owned	Loan	Total Stock	Loan Entries	Total Supply	Loan Cotton Repossessed	Total Distribution
	Thousand Acres		¢ Per Lb.		In Thousands of Running Bales						
1979–0	14,395	12,831	50.23	57.70	—	637	637	1,757	2,396	1,853	1,853
1980–1	14,843	13,215	48.00	58.40	—	542	542	2,328	2,870	2,218	2,218
1981–2[1]	14,484	13,841	52.46	70.87	—	652	652	6,082	6,734	2,975	2,975
1982–3[1]	12,599	9,729	57.08	71.00	2	3,757	3,759	5,056	8,815	4,049	4,049
1983–4[3]	9,281	7,331	55.00	76.00	334	4,432	4,766	1,650	6,416	1,800	1,800
1984–5[3]	10,759		55.00	81.00							

[1] Preliminary. [2] Strict low middling, $1\frac{1}{16}$″ at 10 markets. [3] Estimate. [4] Early forfeitures. *Source: Department of Agriculture* T.174

High, Low & Closing Prices of May Cotton Futures at New York In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1979	High	63.40	63.65	67.15	66.50	66.22	69.00	69.20	75.70	75.05	73.85	70.90	68.15	64.45	61.70	62.95	75.70
	Low	61.00	61.50	63.20	63.00	63.00	65.35	66.85	68.80	70.72	68.65	65.50	63.90	59.20	57.50	59.45	54.95
	Close	62.35	63.35	65.25	64.90	66.35	68.35	69.00	73.85	73.67	69.66	65.82	64.17	59.67	61.50	60.47	—
1980	High	67.90	65.70	66.40	68.25	67.00	70.00	69.00	68.90	73.00	76.40	86.00	90.42	90.70	87.40	84.40	90.70
	Low	66.00	64.10	63.00	63.90	64.55	65.90	66.25	66.40	68.20	70.82	73.97	80.70	77.52	79.50	80.90	64.15
	Close	65.65	65.45	64.15	65.60	66.05	69.20	67.70	68.22	71.77	75.95	85.37	86.77	85.12	81.99	83.75	—
1981	High	80.60	77.60	78.42	75.00	85.70	94.50	96.87	93.50	93.12	97.67	96.50	93.70	89.80	89.20	85.20	97.67
	Low	74.50	74.30	74.92	72.80	75.50	81.65	87.00	88.20	86.70	88.40	88.35	86.00	84.75	83.75	80.65	71.00
	Close	77.00	75.05	75.00	74.80	84.80	93.92	90.40	90.20	92.08	95.60	90.90	90.14	86.12	84.00	80.45	—
1982	High	84.90	85.35	83.66	82.50	81.27	79.40	73.80	71.90	70.45	67.40	67.95	67.65	66.75	68.95	68.50	87.50
	Low	82.75	83.20	81.80	78.70	79.10	71.45	68.55	68.30	64.40	63.11	65.55	64.65	64.01	65.40	67.50	63.11
	Close	84.20	83.26	82.90	79.00	79.30	69.15	69.15	69.45	65.29	65.70	67.82	64.94	65.92	68.30	68.43	—
1983	High	74.65	76.75	76.50	77.50	77.50	74.90	72.15	69.25	68.15	68.90	68.40	71.25	76.42	75.30	71.60	77.50
	Low	73.50	74.20	73.74	69.45	74.50	69.50	66.75	65.80	65.81	66.20	66.35	66.26	70.30	70.25	69.77	65.80
	Close	74.53	76.40	73.30	76.60	74.66	69.90	67.25	67.42	66.62	67.41	67.33	71.20	75.32	71.08	71.03	—
1984	High	74.60	75.50	80.00	83.40	82.70	83.80	83.40	82.15	83.80	82.05	78.25	78.79	81.85	82.54		
	Low	70.60	73.25	73.20	79.25	78.20	80.30	78.15	78.70	80.31	78.35	74.75	74.05	77.70	77.90		
	Close	73.80	73.80	80.00	80.00	81.00	82.80	79.30	81.65	80.98	78.42	77.13	78.09	81.74	82.39		
1985	High	81.85	78.00														
	Low	77.70	75.80														
	Close	81.74	78.00														

Source: N.Y. Cotton Exchange T.184

Month End Open Interest of Cotton Futures at New York In Contracts

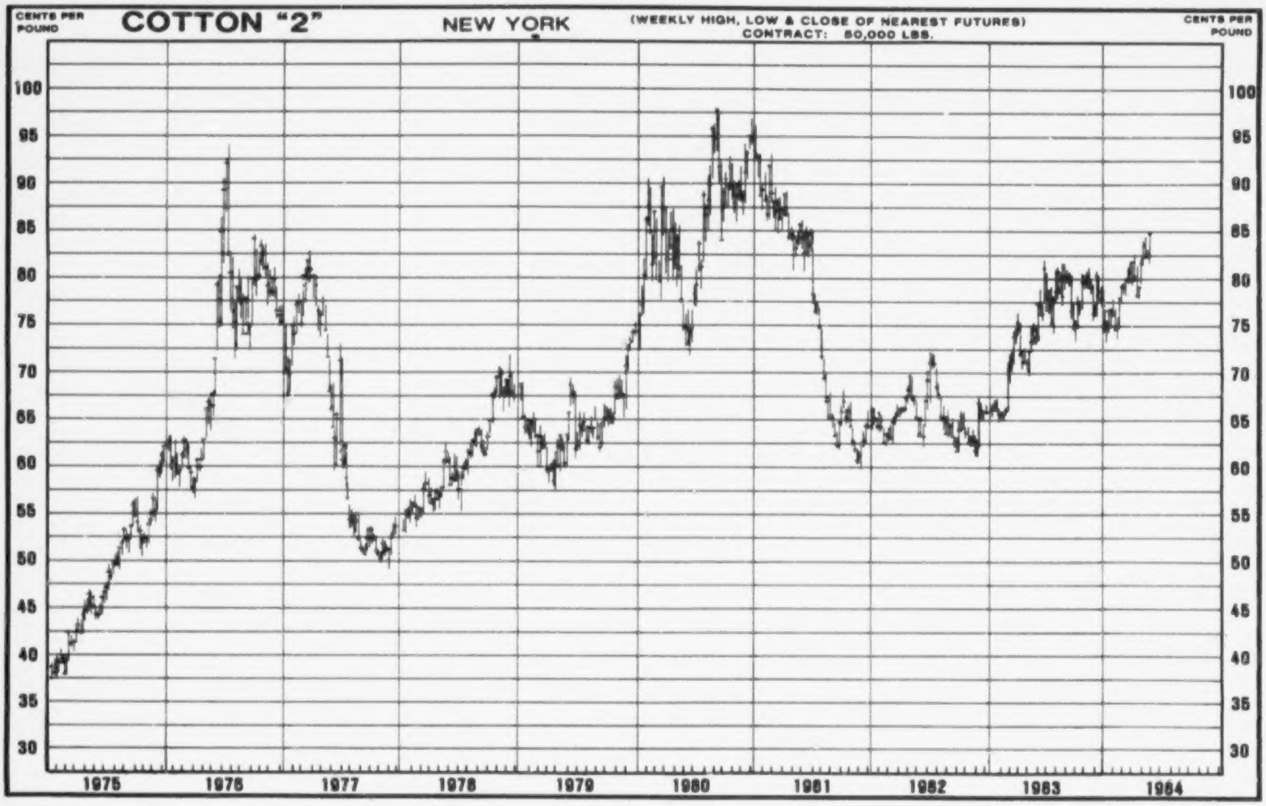
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	35,702	37,809	39,058	35,174	37,391	41,908	33,897	39,343	34,326	41,717	39,684	43,981
1980	54,046	57,891	44,363	38,596	31,753	27,276	39,711	46,814	49,370	45,433	40,208	38,022
1981	32,078	34,782	25,882	24,108	26,793	27,286	26,009	30,014	32,121	31,671	29,157	28,584
1982	30,296	31,740	30,230	31,422	27,665	24,675	24,978	25,052	27,047	26,070	26,949	26,581
1983	29,544	34,165	36,109	33,990	35,026	33,851	31,402	33,981	31,531	29,272	30,868	30,758
1984	32,246	28,060	34,212									

Source: N.Y. Cotton Exchange T.182

Volume of Trading of Cotton Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	118,361	142,088	139,547	122,110	131,245	191,763	102,928	115,842	114,684	135,924	207,659	159,349	1,689,051
1980	286,058	278,901	290,133	206,682	191,067	128,393	175,619	188,542	224,323	186,615	173,081	173,133	2,523,447
1981	156,303	166,292	150,297	117,653	90,157	117,249	99,175	95,312	96,956	120,301	115,833	89,985	1,415,213
1982	100,242	104,444	103,697	106,892	95,597	151,068	116,211	99,674	101,119	94,265	98,597	83,988	1,255,202
1983	97,947	123,620	139,032	132,447	139,953	153,932	143,154	156,680	121,972	113,759	137,472	90,187	1,550,117
1984	124,735	133,891	127,448										

Source: N.Y. Cotton Exchange T.183



United States Government Crop Forecasts and Actual Cotton Crops

Year	Forecasts of Production (1,000 Bales of 480 Lbs.[1]) Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Actual Crop	Forecasts of Yields (In Lbs. Per Harv. Acre) Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Actual Yield
1974	12,758	13,200	12,813	12,053	11,702	11,540	470	470	470	443	443	442
1975	9,416	9,309	9,059	9,034	8,476	8,302	484	479	467	466	437	453
1976	10,734	10,375	10,251	9,891	10,264	10,581	466	451	445	435	451	465
1977	13,535	13,302	13,317	13,832	14,496	14,389	506	495	500	503	525	520
1978	11,820	11,155	10,873	10,981	10,841	10,856	462	425	429	418	421	420
1979	13,710	14,245	14,356	14,544	14,527	14,629	497	525	528	535	534	547
1980	12,812	11,689	11,589	11,224	11,125	11,122	461	421	419	408	411	404
1981	14,789	15,507	15,476	15,560	15,733	15,646	515	540	540	543	546	543
1982	11,143	11,029	11,365	11,947	12,102	11,963	563	569	587	605	613	590
1983	7,810	7,776	7,550	7,497	7,725		503	501	487	504	506	

[1] Net Weight bales. *Source: Crop Reporting Board, U.S.D.A.* T.175

U.S. Upland Cotton—Ginnings, by Staple Length In Thousands Running of Bales

Year beginning August	$^{13}/_{16}$ inch and shorter	$^{7}/_{8}$ and $^{29}/_{32}$ inch	$^{15}/_{16}$ and $^{31}/_{32}$ inch	1 and $1\,^{1}/_{32}$ inches	$1\,^{1}/_{16}$ and $1\,^{3}/_{32}$ inches	$1\,^{1}/_{8}$ and $1\,^{7}/_{32}$ inches	$1\,^{3}/_{16}$ and $1\,^{7}/_{32}$ inches	$1\,^{1}/_{4}$ inches and longer	All staple lengths[1]
1977	0	69	2,301	3,058	6,960	1,515	3	3	13,909
1978	1	98	1,309	2,369	5,522	1,012	2	2	10,315
1979	4	150	2,102	2,975	5,806	3,047	8	1	14,093
1980	7	203	1,201	1,834	4,957	2,288	33	[2]	10,523
1981	2	180	2,729	2,824	7,143	2,167	27	1	15,073
1982[1]	2	95	1,351	1,075	4,533	4,360	13	[2]	11,429

[1] Preliminary. [2] Less than 500 bales. *Source: Agricultural Marketing Service, U.S.D.A.* T.179

COTTON

United States Cotton Ginnings

Crop Year	Aug. 1	Aug. 16	Sept. 1	Sept. 16	Oct. 1	Oct. 15	Nov. 1	Nov. 15	Dec. 1	Dec. 15	Jan. 1	Jan. 15	Feb. 1	Total Crop
	Ginnings to: (In Thousands of Running Bales)													
1977-8	86	N.A.	694	1,169	2,353	4,343	7,494	9,723	11,711	12,963	13,513	13,742	13,859	14,018
1978-9	144	N.A.	672	788	1,490	2,904	4,659	5,890	6,668	8,096	9,317	9,723	10,049	10,549
1979-0	72	N.A.	539	697	916	2,105	4,799	7,287	9,937	11,772	12,728	13,439	13,832	14,262
1980-1	200	N.A.	582	745	1,312	2,566	4,600	6,698	7,841	8,808	9,873	10,430	10,676	10,826
1981-2	44	N.A.	427	645	1,725	3,299	5,541	7,688	10,156	12,023	13,460	14,276	14,778	15,150
1982-3	40	N.A.	453	578	1,529	2,660	5,288	7,202	8,823	9,627	10,574	10,974	11,300	11,526
1983-4[1]	2	N.A.	313	401	770	1,753	3,348	4,644	6,007	6,891	7,214	7,399	7,478	7,500

[1] Preliminary. *Source: Bureau of Census* T.171

United States Production of Cotton (Lint) & American-Pima In Thousands of 480 Pound Net Weight Bales

Year	Upland														Total Amer. Pima
	Alabama	Arizona	Arkansas	California	Georgia	Louisiana	Mississippi	Missouri	No. Car.	Oklahoma	So. Car.	Tennessee	Texas	New Mexico	
1977	277	1,070	1,035	2,790	82	656	1,645	235	53	436	109	255	5,465	173	112.2
1978	291	1,068	660	1,940	111	478	1,378	188	45	355	115	235	3,792	101	93.4
1979	324	1,280	606	3,408	152	690	1,437	157	43	522	116	171	5,515	104	98.6
1980	275	1,354	444	3,109	86	460	1,143	177	52	205	77	200	3,320	107	104.2
1981	422	1,556	604	3,535	159	742	1,565	168	95	440	164	315	5,663	141	79.6
1982	460	1,095	534	3,073	235	870	1,760	204	102	238	155	339	2,723	88	98.7
1983[1]	180	715	320	1,960	115	540	900	75	44	140	55	150	2,392	76	90.5

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.176

Gross Entries of Cotton into U.S. Government Loan Program In Thousands of Running Bales

Crop Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May[1]	June[1]	July[1]	Seasonal Total
1977-8	[2]	31	214	802	1,531	1,544	310	72	30	13	18	[2]	4,564
1978-9	0	5	26	89	215	584	352	189	68	16	14	[2]	1,560
1979-0	0	[2]	23	294	319	600	316	110	51	35	8	[2]	1,759
1980-1	0	[2]	8	253	528	912	343	204	36	28	16	[2]	2,328
1981-2	0	9	132	293	1,081	2,796	1,120	473	117	39	21	2	6,083
1982-3	0	46	143	674	1,857	1,590	4,503	4,160	43	23	13	3	5,062
1983-4	0	0	165	227	253	513	188	264					

NOTE: Seasonal totals are net, due to allowances for rejections. [1] Entries after April 30 represent late reporting. [2] Less than one thousand bales. *Sources: N.Y. Cotton Exchange; Commodity Credit Corporation* T.178

Average Wholesale Price of Cotton Yarn[1] (30/1, Combed, Knitting) on Cones Index 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	145.1	144.3	146.3	147.5	148.7	147.3	146.5	142.6	156.5	153.9	153.2	153.9	148.8
1978	153.2	155.2	157.5	158.1	160.1	162.7	163.7	163.7	163.7	165.0	165.0	165.6	161.1
1979	165.6	166.3	165.6	165.6	165.9	166.9	166.9	167.3	167.9	169.9	172.8	176.3	168.1
1980	180.6	198.3	200.0	203.0	204.6	202.7	203.3	206.3	206.3	207.6	210.6	211.6	202.9
1981	212.9	214.6	214.6	212.6	211.9	211.9	210.3	207.0	203.0	199.0	196.7	192.1	207.2
1982	244.0	243.6	242.8	242.2	242.7	240.3	240.4	240.1	239.0	237.4	237.1	236.4	240.0
1983	234.8	234.1	234.2	236.1	236.1	236.7	237.5	239.7	241.5	242.4	243.5	244.3	238.4
1984	244.9												

[1] Natural stock, f.o.b. mill. *Source: Bureau of Labor Statistics* (0326-01) T.181

U.S. Daily Rate of Total Cotton Mill Consumption on Cotton-System Spinning Spindles[2] In Running Bales

Crop Yr.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1977-8	24,687	24,230	25,590	25,235	22,476	24,629	25,042	24,790	24,213	24,173	22,984	19,169	23,935
1978-9	22,941	22,780	24,090	23,809	21,735	24,114	23,567	25,306	23,358	24,193	24,454	20,127	23,373
1979-0	23,617	24,177	25,188	24,099	21,813	24,160	25,353	25,654	24,899	24,781	23,883	18,473	23,836
1980-1	22,130	22,816	23,884	22,885	19,000	21,773	22,312	21,544	21,741	22,060	21,260	19,250	26,066
1981-2	21,448	20,679	22,420	20,138	15,985	18,898	19,885	19,720	20,476	19,580	18,382	15,980	19,466
1982-3	19,295	18,954	20,794	19,526	17,009	20,211	21,505	21,966	21,525	22,042	21,739	18,444	20,251
1983-4[1]	22,625	22,392	22,935	22,318	18,727	22,716	23,199						

[1] Preliminary. [2] Not seasonally adjusted. *Source: Bureau of the Census; U.S.D.C.* T.180

Exports of American Cotton from the United States In Thousands of Running Bales

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1973-4	329	266	259	257	592	545	598	778	638	561	496	426	5,745
1974-5	261	125	121	272	350	409	380	346	371	364	392	356	3,746
1975-6	325	258	226	176	237	214	141	381	302	327	315	276	3,176
1976-7	274	342	217	265	376	354	509	536	548	400	462	282	4,564
1977-8	181	200	149	333	496	521	502	704	640	510	528	456	5,218
1978-9	524	388	283	355	464	517	577	574	602	542	614	410	5,849
1979-0	463	428	390	630	902	737	1,025	1,150	916	911	686	540	8,778
1980-1	402	393	237	436	541	669	2,352	733	498	458	320	264	7,303
1981-2	990	261	262	478	737	653	754	873	676	484	498	396	7,062
1982-3[1]	342	351	293	382	377	438	368	487	612	464	831	409	5,354
1983-4[1]	383	322	261	441	632								

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.185

U.S. Exports of American Cotton to Countries of Destination In Thousands of 480 lb. Bales

Yr. Beg. Aug. 1	Bangla-desh	Can-ada	Hong Kong	France	W. Ger-many	India	Italy	Japan	Nether-lands	Spain	Swe-den	United King-dom	Rep. of Korea	China	Tai-wan	World Total
1973-4	98	258	356	81	101	0	124	1,312	17	35	40	57	722	(360)	542	5,746
1974-5	51	186	73	65	52	0	97	957	19	58	34	33	628	9	384	3,746
1975-6	142	131	126	23	11	—	53	646	3	17	21	10	893	0	498	3,178
1976-7	122	187	358	45	36	273	85	973	12	86	17	66	913	0	436	4,565
1977-8	46	214	479	80	65	1	77	1,028	21	64	21	59	1,172	443	490	5,219
1978-9	116	222	427	63	96	1	146	1,342	18	65	23	72	1,278	648	454	6,180
1979-0	71	272	636	92	204	0	185	1,588	11	131	21	72	1,484	2,268	728	9,229
1980-1	33	267	205	42	112	—	54	1,139	1	60	10	38	1,303	1,375	351	5,926
1981-2	50	167	243	58	119	—	106	1,626	2	57	17	43	1,412	848	777	6,567
1982-3[1]	88	238	158	45	163	0	105	1,286	7	72	23	50	1,322	20	378	5,207
1983-4[2]																6,780

[1] Preliminary. [2] Estimate. *Source: Bureau of the Census* T.189

U.S. Exports of Cotton Cloth (Raw Cotton Equivalent) In Thousands of Bales (Net Weight—480 Lbs.)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	32.3	30.2	38.3	38.0	38.8	37.9	35.4	33.9	42.5	43.8	44.8	43.3	459.4
1974	44.1	43.6	52.9	51.0	51.5	51.2	44.2	36.7	39.3	41.4	39.4	36.2	531.5
1975	36.9	36.0	43.8	43.8	37.5	37.5	34.3	38.1	41.0	49.8	41.6	39.9	488.3
1976	42.8	41.6	54.6	48.0	41.1	47.8	39.0	39.0	45.8	57.5	45.6	53.2	556.0
1977	42.8	51.6	47.1	47.2	36.9	36.5	29.4	31.0	40.2	24.8	26.3	46.3	460.1
1978	32.2	35.2	37.1	35.2	34.5	33.0	31.4	35.9	37.9	44.8	50.1	50.4	457.9
1979	45.6	45.4	56.7	44.1	50.5	57.0	46.2	47.1	55.8	59.0	62.3	58.1	627.7
1980	50.6	54.2	52.4	45.2	42.4	47.2	34.6	44.3	48.0	42.0	38.4	40.9	540.2
1981	34.8	28.2	35.8	35.7	30.9	30.8	21.7	25.9	25.8	27.5	26.6	21.9	345.6
1982	18.2	18.6	20.4	20.6	24.3	24.8	22.7	15.7	18.4	20.7	18.4	16.4	239.2
1983[1]	20.1	15.1	18.2	17.2	14.2	15.9	12.7	14.0	15.4	16.0	15.3		
1984													

[1] Preliminary. *Source: Bureau of the Census* T.193

Cotton Cloth[1] Production in the United States In Millions of Linear Yards

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year	Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
1970	1,656	1,561	1,468	1,562	6,246	1977	1,207	1,145	982	1,023	4,356
1971	1,607	1,608	1,405	1,527	6,149	1978	1,056	1,019	912	1,020	4,007
1972	1,530	1,475	1,277	1,384	5,616	1979	1,018	998	914	927	3,858
1973	1,377	1,324	1,160	1,226	5,086	1980	1,226	1,182	987	1,062	4,456
1974	1,322	1,279	1,127	985	4,714	1981	980	974	956	1,002	3,856
1975	902	978	1,051	1,164	4,095	1982[2]	966	961	942	992	3,779
1976	1,268	1,221	1,099	1,129	4,718	1983[2]	1,046	1,042	1,038		

[1] Cotton broadwoven goods over 12 inches in width. [2] Preliminary. *Source: Bureau of the Census* T.192

Raw Cotton Equivalent of U.S. Exports of Domestic Cotton Manufactures

Year and month	Yarn, thread, twine, and woven fabric							Manufactured products			
				Woven fabric		Total		House, furnishings			
	Yarn	Sewing thread, crochet, darning and embroidery cotton	Twine and cordage	Standard constructions and tire cord[1]	Other[2]	Weight	Bales	Knit fabrics	Blankets, spreads, pillow cases, and sheets	Towels	Other[3]
	1,000 pounds						*1,000 bales*[8]	*1,000 pounds*			
1982	17,981	11,277	822	71,570	13,186	114,838	239.3	4,720	14,092	6,222	3,241
1983	18,854	11,577	793	51,667	7,747	90,636	188.8	2,434	8,725	5,705	715
1983											
January	1,796	1,314	55	5,589	878	9,633	20.1	106	881	537	46
February	1,720	506	36	4,101	891	7,254	15.1	148	1,028	310	46
March	2,727	656	116	4,441	779	8,718	18.2	203	1,194	446	37
April	1,862	1,044	73	4,451	801	8,231	17.2	221	723	647	81
May	1,795	1,064	71	3,324	566	6,820	14.2	471	698	481	59
June	1,643	1,156	113	4,095	640	7,647	15.9	252	727	560	53
July	910	749	100	3,772	573	6,103	12.7	113	433	521	65
August	1,322	884	41	3,928	548	6,723	14.0	261	677	510	39
September	1,287	1,042	38	4,201	824	7,391	15.4	179	837	400	50
October	1,134	1,134	38	4,927	449	7,682	16.0	199	522	352	56
November	1,282	862	71	4,632	491	7,338	15.3	173	550	357	105
December	1,376	1,166	41	4,206	307	7,096	14.8	108	455	584	78
1984											
Jan.											
Feb.											

	Manufactured Products							Total	
	Wearing apparel					Total			
	Knit[4]	Other[5]	Other household & clothing articles[6]	Floor covering	Industrial products[7]	Weight	Bales	Weight	Bales
	1,000 pounds					*1,000 bales*[8]		*1,000 pounds*	*1,000 bales*[8]
1982	34,713	45,321	15,918		14,277	138,506	288.6	253,342	527.8
1983	27,957	44,113	13,736	13,986	11,601	128,977	268.7	219,614	457.5
1983									
January	2,830	2,792	2,046	461	879	10,579	22.0	20,212	42.1
February	2,556	3,198	1,719	696	753	10,456	21.8	17,711	36.9
March	2,991	3,460	897	835	968	11,031	23.0	19,749	41.1
April	2,785	3,558	967	1,174	915	11,070	23.1	19,301	40.2
May	2,006	3,490	947	963	1,012	10,128	21.1	16,948	35.3
June	1,799	3,866	1,058	1,365	1,089	10,769	22.4	18,416	38.4
July	1,793	3,528	592	914	1,002	8,961	18.7	15,064	31.4
August	2,296	4,189	944	1,178	837	10,931	22.8	17,654	36.8
September	2,292	4,029	1,384	1,550	1,075	11,796	24.6	19,186	40.0
October	2,274	4,554	1,076	1,799	1,086	11,919	24.8	19,601	40.8
November	2,234	4,017	1,221	1,567	945	11,169	23.3	18,507	38.6
December	2,101	3,432	885	1,484	1,040	10,168	21.2	17,265	36.0
1984									
Jan.									
Feb.									

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[1] Includes fabrics, tire cord and cloth for export to the Philippines to be embroidered and otherwise manufactured and returned to the United States. [2] Includes tapestry and upholstery fabrics, table damask, pile fabrics and remnants. [3] Includes curtains and draperies, house furnishings not elsewhere specified. [4] Includes gloves and mitts of woven fabric. [5] Includes underwear and outerwear of woven fabric, handkerchiefs, and wearing apparel containing mixed fibers (corsets, brassieres, and girdles, garters, armbands and suspenders, neckties and cravats). [6] Includes canvas articles and manufactures, braids and narrow fabrics, elastic webbing, waterproof garments, and laces and lace articles. [7] Includes rubberized fabrics, bags, and industrial belt and belting. [8] 480-pound net weight bales. *Source: U.S. Bureau of the Census.* T.192a

Raw Cotton Equivalent of U.S. Imports for Consumption of Cotton Manufactures

Year and month	Yarn, thread, and woven fabric						Primarily manufactured products			
	Yarn	Sewing thread, crochet, knitting yarn	Woven fabric: 100 percent cotton	Woven fabric: Blends[1]	Total: Weight	Total: Bales	Pile fabrics and mfrs.[2]	Table damask and mfrs.	Bed clothes and towels[3]	Gloves, hosiery, and hdkf.
	1,000 pounds					*1,000 bales*[8]	*1,000 pounds*			
1982	27,264	1,244	218,619	41,518	288,645	601.3	6,342	481	64,060	22,652
1983	40,881	1,250	274,467	64,108	380,706	793.1	7,721	438	70,067	25,383
1983										
January	3,670	60	23,065	5,434	32,229	67.1	548	48	6,788	2,711
February	1,720	119	20,733	4,065	26,637	55.5	368	16	5,862	1,893
March	2,716	91	20,626	3,776	27,209	56.7	427	33	6,928	1,788
April	1,423	132	20,037	4,631	26,223	54.6	306	37	5,053	1,850
May	3,262	102	21,500	4,730	29,595	61.7	834	43	5,138	2,142
June	3,303	116	20,277	4,578	28,274	58.9	725	31	5,368	2,267
July	3,320	94	22,937	4,598	30,949	64.5	1,090	37	5,237	2,302
August	2,810	92	22,952	6,088	31,942	66.6	649	41	5,772	1,780
September	5,905	86	25,307	6,110	37,408	77.9	434	29	5,813	2,083
October	3,009	115	24,300	6,836	34,260	71.4	736	65	6,175	2,376
November	5,699	109	26,234	6,781	38,823	80.9	473	22	5,753	2,078
December	4,043	134	26,499	6,481	37,157	77.4	1,131	36	6,180	2,113
1984										
Jan.										
Feb.										

	Primarily manufactured products							Total	
	Other wearing apparel[4]	Lace fabric and articles[5]	Household and clothing articles[6]	Misc.-products[7]	Floor covering	Total: Weight	Total: Bales	Weight	Bales
	1,000 pounds						*1,000 bales*[6]	*1,000 pounds*	*1,000 bales*[8]
1982	487,867	4,046	10,628	[9]10,053	2,408	[9]608,537	1,267.8	[9]897,182	1,869.2
1983	597,423	5,957	11,855	[9]14,335	7,526	[9]740,631	1,543.0	[9]1,121,337	2,336.1
1983									
January	49,331	368	920	[9]1,052	920	[9]62,686	130.6	[9]94,915	197.7
February	47,043	353	895	[9]963	666	[9]58,059	120.9	[9]84,696	176.5
March	48,694	446	914	[9]1,161	874	[9]61,265	127.6	[9]88,474	184.3
April	40,079	448	764	[9]958	773	[9]50,268	104.7	[9]76,491	159.4
May	47,948	423	1,035	[9]1,156	957	[9]59,676	124.3	[9]89,271	186.0
June	59,754	446	1,069	[9]1,479	477	[9]71,616	149.2	[9]99,890	208.1
July	59,245	375	936	[9]1,165	465	[9]70,778	147.5	[9]101,727	211.9
August	59,738	645	1,076	[9]1,471	510	[9]71,682	149.3	[9]103,624	215.9
September	50,978	527	925	[9]1,232	389	[9]62,410	130.0	[9]99,818	208.0
October	54,182	652	1,075	[9]1,149	497	[9]66,907	139.4	[9]101,167	210.8
November	42,831	712	1,073	[9]1,141	481	[9]54,564	113.7	[9]93,387	194.6
December	37,600	562	1,173	[9]1,408	517	[9]50,720	105.7	[9]87,877	183.1
1984									
Jan.									
Feb.									

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[1] Includes tapestry and upholstery fabrics, tire cord fabrics, and cloths in chief value cotton containing other fibers. [2] Includes velvets and velveteens, corduroys, plushes and chenilles, and manufactures of pile fabrics. [3] Includes blankets, quilts, bedspreads, sheets and pillow cases. [4] Includes knit and woven underwear and outerwear (collars and cuffs, shirts, coats, vests, robes, pajamas, and ornamented wearing apparel). [5] Includes nets and nettings, veils and veilings, edging, embroideries, etc., and lace window curtains. [6] Includes braids (except hat braids) tubing, labels, lacing, wicking, loom harness, table and bureau covers, polishing and dust cloths, fabric with fast edges, cords, and tassels, garters, suspenders and braces, corsets and brassieres etc. [7] Includes belts and belting, fish nets and netting, and coated, filled or waterproof fabrics. [8] 480-pound net weight bales. [9] Does not include quantities in the TSUSA 706 luggage categories. The raw fiber equivalent quantities for May–December 1982 was 6,609 thousand pounds. For January–December 1983 these quantities are 1,271, 1,824, 1,433, 991, 879, 1,362, 1,544, 900, 1,021, 793, 743, and 1,330 thousand pounds, respectively. *Source: U. S. Bureau of the Census.* T.192b

Cottonseed and Products

World cottonseed production for 1983/84 was estimated by the USDA in early April 1984 at 27.4 million metric tons, about the same as the previous season's level. The Payment-in-Kind (PIK) program accounted for most of a 35 percent drop in U.S. production, and significant reductions were also registered for Pakistan, Brazil, and Egypt. Reductions in these and other areas were about offset by a record-large crop in China, and larger harvests in India and Turkey. The world cottonseed crush in 1983/84 was estimated at 21.4 million tonnes, slightly lower than the 21.6 million estimated for 1982/83. International trade of cottonseed represents a very small share of world cottonseed production. World 1983/84 ending stocks of cottonseed were estimated by the USDA at 363 thousand tonnes, down from 503 thousand at the end of the previous season.

Cottonseed meal production worldwide in 1983/84 was estimated by the USDA at 9.9 million tonnes, about the same as in 1982/83. World exports were estimated at 751 thousand tonnes, down from an estimated 804 thousand in 1982/83. India, Argentina and Brazil accounted for 62 percent of 1982/83 world cottonseed meal exports, and Denmark remained the world's largest importer-accounting for 56 percent of estimated 1982/83 world imports.

Most of the world's cottonseed oil production is produced and consumed in major vegetable oil importing countries. World production of cottonseed oil in 1983/84 was estimated by the USDA at 3.34 million tonnes, compared with 3.35 million in 1982/83. World exports were estimated at only 271 thousand tonnes versus 364 thousand estimated for 1982/83, and ending stocks were estimated at only 44 thousand tonnes versus 96 thousand at the end of the 1982/83 season. The U.S. and Brazil are the major exporters of cottonseed oil.

U.S. 1983/84 cottonseed supply was forecast by the USDA early in 1984 at 3.1 million short tons versus 4.7 million in the preceding season, total disappearance at 3.3 million tons versus 5.2 million, and ending stocks at 200 thousand tons versus 371 thousand at the end of 1982/83. The season's average price received by farmers was estimated at $160 per ton versus $77.50 in the 1982/83 season.

Cottonseed meal supply in the U.S. for the 1983/84 season was forecast by the USDA at 1.1 million tons versus 1.7 million in 1982/83, total disappearance at 1.0 million versus 1.6 million tons, and ending stocks at only 60,000 tons versus 93 thousand a year earlier.

U.S. 1983/84 cottonseed oil supplies were estimated at only 795 thousand tons versus some 1.2 million tons in the preceding season, total disappearance at 745 thousand tons versus 1.1 million, and ending stocks at 50 thousand tons versus 90 thousand at the end of the 1982/83 season.

World Production of Cottonseed In Thousands of Metric Tons

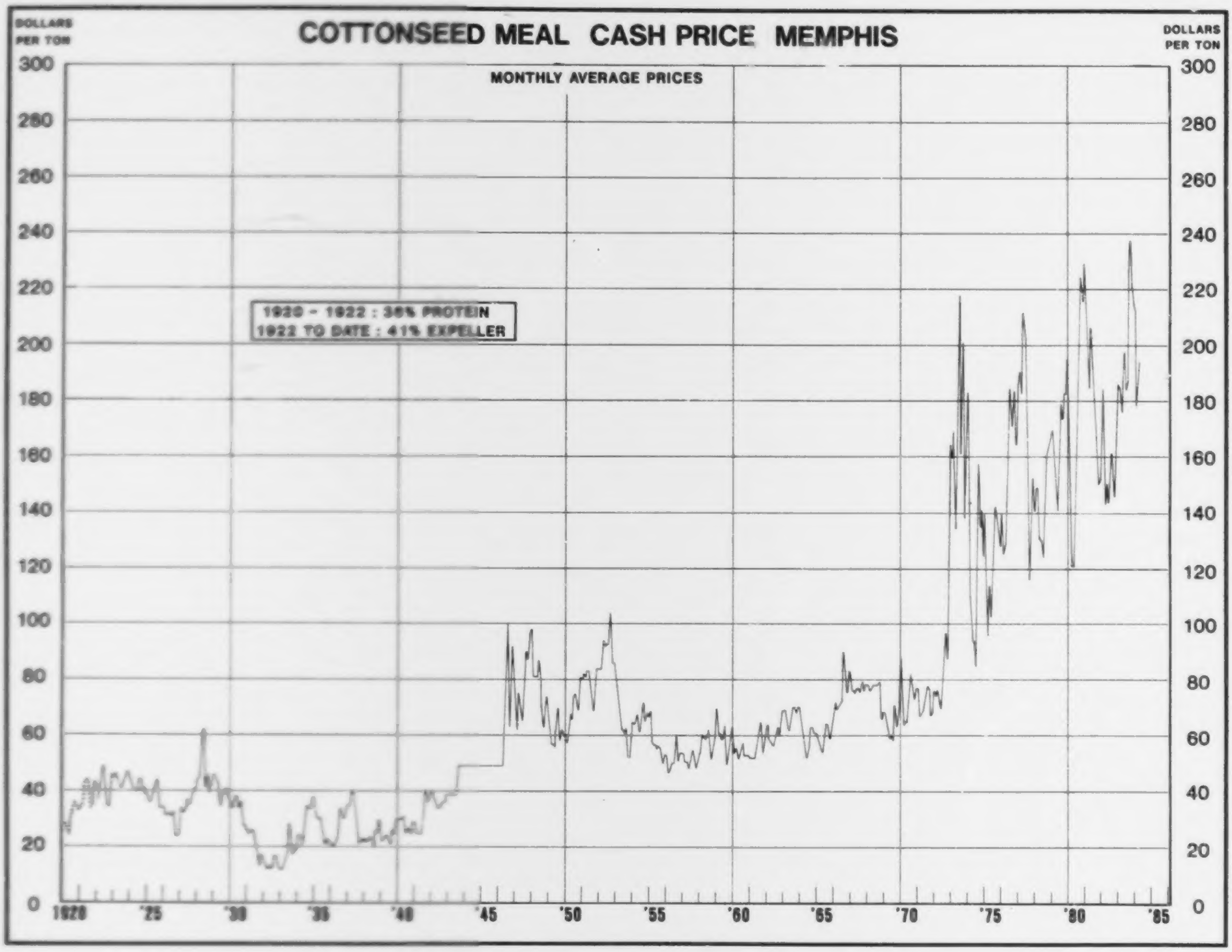
Crop Year	Sudan	Argentina	Brazil	China[2]	Egypt	India	Mexico	Pakistan	Peru	Turkey	South Africa	USSR	United States	World Total
1973–4	432	248	1,171	4,260	895	2,400	735	1,264	173	821	35	4,767	4,550	25,330
1974–5	395	349	1,034	5,100	862	2,618	650	1,285	132	956	80	5,212	4,091	25,745
1975–6	200	270	802	5,000	753	2,444	875	1,220	102	736	83	4,686	2,749	23,738
1976–7	300	364	984	4,660	652	2,138	340	992	102	768	37	4,888	3,764	23,227
1977–8	357	300	977	4,100	678	2,500	386	836	138	920	70	4,693	5,009	25,112
1978–9	249	414	844	4,334	690	2,800	590	1,151	150	760	105	4,804	3,873	23,652
1979–0	215	330	951	4,414	792	2,643	560	1,436	160	762	128	4,510	5,242	25,121
1980–1	197	315	1,057	5,414	844	2,700	590	1,422	154	800	118	5,082	4,056	25,622
1981–2[1]	305	170	1,133	5,936	805	2,800	525	1,497	134	780	72	5,189	5,803	28,172
1982–3[1]	394	290	1,164	7,196	738	2,670	310	1,648	112	781	66	5,094	4,304	27,405
1983–4[3]		337	918	9,145	629	2,770		922		810		5,000	2,817	27,434

[1] Preliminary. [2] Including Manchuria. [3] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.* T.194

Salient Statistics of Cottonseed in the United States

		In Thousands of Short Tons				Products Produced — In Million Pounds					Yield Per Ton Crushed — In Pounds				
Year Begin. Aug.	Farm Value of Production Mil. $	Exports	Seed for Planting	Residual[2]	Crushings	Oil	Meal	Linters[5]	Hulls	Other[3]	Oil	Meal	Linters	Hulls	Total Value of Pdt's. $ Per Ton
1973–4	501.2	49	198	6	4,792	1,551	4,354	1,341	2,346		324	908	175	489	186.76
1974–5	611.2	6	128	74	4,226	1,347	3,770	1,269	2,144		319	892	190	507	189.19
1975–6	312.3	61	190	367	2,952	986	2,476	847	1,546		334	891	181	523	171.66
1976–7	425.4	26	181	333	3,499	1,141	3,286	983	1,832		326	898	177	524	189.04
1977–8	388.0	41	175	454	4,313	1,386	4,166	1,174	2,152		322	918	172	500	160.89
1978–9	485.6	16	175	247	4,127	1,282	3,770	1,077	2,068						221.00
1979–0	697.6	94	196	725	4,230	1,423	4,096	1,129							194.65
1980–1	574.5	133	— 922 —		4,076	1,191	3,572	1,097							
1981–2[1]	549.0	45	—1,394—		4,575	1,551	4,380	1,210							
1982–3[4]	368.2	12	—1,342—		3,800	1,133	3,176								
1983–4[4]	497.0	5	—1,072—		2,200	705	2,024								

[1] Preliminary. [2] Mainly used on farms for feed & fertilizer. [3] Including loss; and also motes, grabbots & hullfibers. [4] Forecast. [5] In THOUSANDS OF RUNNING BALES. *Source: Economic Research Service, U.S.D.A.* T.195



Average Wholesale Price of Cottonseed Meal (41% Solvent[1]) at Memphis In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	77.40	73.60	66.80	68.20	68.80	71.30	74.60	78.00	76.50	66.80	67.80	74.80	72.05
1972	75.70	74.40	75.60	73.60	72.25	70.30	81.40	86.60	96.50	86.60	118.90	164.40	89.69
1973	160.30	168.75	134.75	134.20	207.80	217.50	161.20	201.25	178.75	138.00	160.60	182.50	170.47
1974	159.50	119.40	109.30	93.60	94.25	85.00	133.50	157.50	135.00	141.25	125.00	140.00	124.44
1975	121.60	100.50	95.90	114.00	105.60	116.40	123.25	131.70	141.50	131.60	127.50	139.50	119.93
1976	136.25	125.00	127.50	130.00	143.75	182.30	184.75	170.70	184.40	163.50	171.00	185.60	158.73
1977	190.00	190.60	184.50	204.40	211.90	200.00	163.10	129.00	116.25	121.25	152.60	141.25	167.07
1978	148.00	148.60	149.40	131.25	130.00	127.50	124.40	149.00	162.00	164.00	166.25	167.50	147.33
1979	169.50	161.90	156.90	141.25	143.00	171.00	178.50	173.75	183.10	183.00	183.75	195.00	170.06
1980	167.00	156.25	136.25	120.50	121.00	129.40	157.00	198.40	224.50	215.00	230.00	224.00	173.33
1981	205.60	178.75	185.00	206.90	201.75	190.00	182.50	183.10	166.50	150.00	150.60	179.00	181.64
1982[1]	184.70	159.40	138.00	148.10	143.75	150.00	158.75	161.50	150.00	145.60	161.70	166.25	155.65
1983	169.40	165.60	153.00	173.40	167.50	164.90	186.90	227.00	237.50	220.00	219.20	214.00	191.53
1984	212.60	178.10	187.30										

[1] Prior to 1982, prices are for 41% protein-expeller. *Source: Economic Research Service, U.S.D.A.* T.196

COTTONSEED

Cottonseed Crushed (Consumption) in the United States In Thousands of Short Tons

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1973–4	275	185	370	532	465	549	463	499	443	424	320	268	4,792
1974–5	235	202	385	431	441	471	434	453	356	331	261	225	4,226
1975–6	225	158	219	291	324	366	336	295	241	203	169	125	2,952
1976–7	115	91	262	403	416	422	414	407	278	266	230	194	3,499
1977–8	187	186	370	459	431	443	403	449	378	341	346	321	4,313
1978–9	312	254	348	423	392	418	404	426	355	325	255	217	4,129
1979–0	258	175	304	394	379	442	388	454	374	388	359	315	4,230
1980–1	330	306	365	426	400	440	378	372	314	278	248	218	4,076
1981–2	191.6	186.2	323.5	455.5	473.3	478.8	446.6	482.3	424.1	426.7	357.1	329.6	4,575
1982–3[1]	290.3	285.8	391.5	481.7	432.6	435.6	368.7	321.7	240.5	214.6	164.2	172.3	3,800
1983–4[1]	166.6	120.7	187.9	308.5									

[1] Preliminary. *Source: Bureau of Census*

T.197

Production of Cottonseed Cake and Meal in the United States In Thousands of Short Tons

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1973–4	125.6	83.1	168.6	242.4	211.4	246.7	209.0	224.1	200.3	194.0	146.7	124.6	2,177
1974–5	109.3	95.3	171.9	186.9	194.1	207.3	192.2	203.4	159.0	150.7	117.0	97.6	1,888
1975–6	100.2	70.9	100.2	127.7	141.6	158.2	150.8	133.9	107.6	91.2	76.1	56.2	1,315
1976–7	53.0	41.5	116.6	181.0	187.8	189.2	185.6	183.9	125.0	120.1	100.1	86.6	1,571
1977–8	83.2	84.0	167.9	210.2	199.4	203.2	187.9	206.6	172.5	156.6	158.7	150.1	1,980
1978–9	148.0	121.4	162.4	197.1	184.3	197.5	193.1	201.2	166.5	155.7	122.2	105.8	1,955
1979–0	119.7	79.3	145.9	183.4	173.0	201.0	178.0	204.0	168.9	181.6	167.8	148.5	1,951
1980–1	152.3	144.0	170.3	202.1	191.1	204.9	176.3	173.4	145.5	130.8	114.2	104.2	1,909
1981–2	88.3	88.7	152.1	220.2	219.0	226.9	206.5	220.3	195.3	195.9	164.4	150.2	2,128
1982–3[1]	129.8	129.3	173.5	219.4	197.3	195.1	167.0	146.7	107.8	97.1	71.4	78.9	1,713
1983–4[1]	78.8	55.3	86.7	147.3									

[1] Preliminary. *Source: Bureau of Census*

T.198

U.S. Production of Crude Cottonseed Oil In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1973–4	87.8	56.2	120.6	169.8	149.0	176.9	150.2	160.4	144.2	140.0	105.9	90.1	1,551
1974–5	78.0	66.9	122.8	138.2	139.1	147.6	137.5	143.4	111.6	105.8	84.1	72.3	1,347
1975–6	76.1	56.1	76.3	101.0	103.2	118.1	111.2	100.2	80.0	67.3	56.1	40.3	986
1976–7	38.0	28.2	80.1	129.2	135.6	135.0	134.3	134.4	91.1	89.3	78.5	67.3	1,141
1977–8	63.0	60.1	115.1	146.3	140.2	141.6	129.5	141.8	122.1	109.2	113.9	107.8	1,391
1978–9	103.5	82.0	108.8	134.0	123.5	134.4	128.0	135.3	115.0	103.7	86.3	73.8	1,328
1979–0	85.5	53.5	98.6	126.5	119.9	142.8	125.7	145.1	119.8	125.5	116.8	104.2	1,363
1980–1	104.9	93.1	116.4	130.6	122.3	131.7	118.9	115.4	100.8	88.7	77.4	69.6	1,270
1981–2	62.1	60.9	111.2	153.5	161.8	154.1	145.6	155.9	138.4	140.1	117.5	105.9	1,507
1982–3[1]	92.0	88.8	129.8	157.3	143.3	137.6	117.7	102.6	75.8	69.0	53.1	55.7	1,223
1983–4[1]	54.6	37.1	58.6	97.1									

[1] Preliminary. *Source: Bureau of Census*

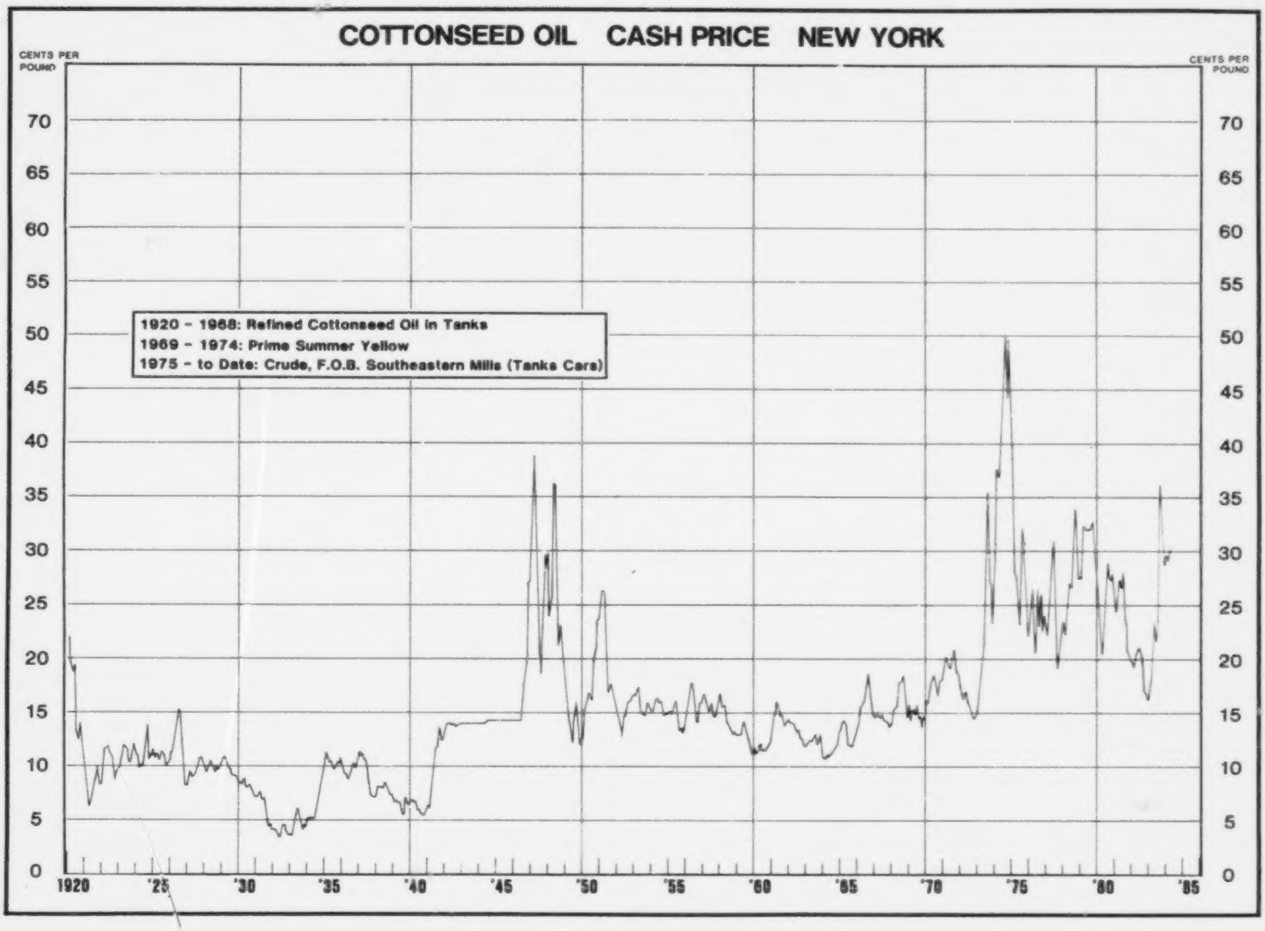
T.199

United States Production of Refined Cottonseed Oil In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1973–4	102.7	66.6	89.0	117.2	123.3	134.9	118.2	125.5	129.3	117.4	90.2	83.2	1,298
1974–5	88.5	63.5	81.8	113.0	117.2	124.4	125.5	117.0	109.0	102.5	93.0	74.0	1,209
1975–6	68.0	73.1	53.6	75.5	97.1	99.6	89.6	91.6	76.2	70.9	60.4	52.7	908
1976–7	48.5	33.4	37.7	73.0	86.2	113.9	117.0	123.7	94.5	98.0	87.5	66.6	866
1977–8	69.0	58.1	92.9	133.0	134.6	111.1	98.2	114.7	102.7	91.3	95.2	91.8	1,214
1978–9	117.5	84.7	83.7	116.0	100.4	118.8	113.1	126.4	108.2	97.9	78.7	78.7	1,224
1979–0	92.7	56.7	69.6	97.0	103.0	119.1	102.7	118.7	107.5	112.8	203.4	103.5	1,186
1980–1	96.2	94.8	94.1	119.8	125.1	131.3	99.6	102.1	113.0	82.9	79.1	73.7	1,212
1981–2	56.9	53.1	84.7	129.3	144.6	110.2	121.2	135.7	124.9	128.9	121.8	104.8	1,316
1982–3[1]	91.3	76.7	91.5	127.3	124.5	119.2	113.4	103.1	82.6	78.0	60.1	56.5	1,124
1983–4[1]	55.2	39.2	54.5	91.1	97.7	99.7	95.0						

[1] Preliminary. *Source: Bureau of Census*

T.202


COTTONSEED OIL CASH PRICE NEW YORK

Average Price of Crude Cottonseed Oil, F.O.B. Southeastern Mills (Tank Cars) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	24.0	26.0	26.5	24.0	20.5	21.5	26.5	23.0	26.0	22.5	24.0	22.5	23.9
1977	22.0	23.0	27.0	30.0	31.0	31.0	23.0	22.0	19.0	20.0	20.5	23.5	24.3
1978	23.0	22.3	25.0	25.0	27.0	26.5	27.5	29.0	34.0	28.5	27.3	27.5	26.9
1979	27.3	32.0	32.5	32.0	32.0	32.0	32.0	32.0	32.9	29.7	27.6	26.2	30.7
1980	24.3	23.8	22.4	20.4	20.9	22.3	27.8	29.0	27.5	27.2	27.8	27.0	25.0
1981	25.3	24.2	25.3	27.3	26.7	26.6	27.9	24.6	20.7	20.5	20.4	19.8	24.1
1982	19.9	19.5	19.1	20.4	21.0	21.1	20.9	20.3	18.0	16.9	16.8	16.3	19.2
1983	16.3	17.8	18.3	21.4	23.4	21.6	23.6	33.3	36.2	31.7	29.0	28.7	25.1

Source: Economic Research Service, U.S.D.A. T.204

U.S. Exports of Cottonseed Oil to Important Countries In Thousands of Metric Tons

Crop Year	Canada	Costa Rica	Dom. Rep.	Egypt	W. Germany	India	Iran	Japan	Korea	Netherlands	Turkey	United Kingdom	Venezuela	Total
1976–7	4.2	0	2.0	194.8	1.7	0	20.1	20.6	.9	9.9	0	4.4	35.1	313.1
1977–8	4.2	0	7.0	192.8	2.6	0	39.7	26.6	1.1	2.1	0	1.4	43.1	344.1
1978–9	6.0	—	37.6	135.1	1.3	0	40.8	37.3	1.3	4.0	0	2.1	30.2	299.7
1979–0	5.3	1.9	28.4	157.1	—	0	—	23.0	1.9	5.2	3.0	.5	72.3	330.2
1980–1	2.5	1.0	33.2	75.6	—	27.2	0	40.2	2.5	5.8	—	1.5	109.1	321.9
1981–2[1]	4.3	3.1	27.3	156.2	2.3	0	0	41.2	3.0	10.2	0	3.5	91.2	384.4
1982–3[1]	4.3	.5	6.6	66.3	3.3	0	0	34.6	2.5	5.1	0	1.5	73.8	247.5

[1] Preliminary. *Source: U.S. Bureau of the Census* T.202A

Supply & Distribution of Cottonseed Oil in the United States In Millions of Pounds

									Utilization							
									Food Uses					Nonfood Uses		
Crop Year Beginning Oct.	Production	Imports for Consumption	Stocks Oct. 1	Total Supply	Exports	Shipments to U.S. Terr.	Domestic Disappearance	Per Capita Consumption — In Lbs. —	Shortening	Margarine	Salad & Cooking Oils	Other	Total	Foots & Loss	Other	Total
1974	1,347	—	135	1,482	673.2	1.1	662	3.11	164	48	349	—	560	94	7	102
1975	986	—	146	1,132	534.6	.7	439	2.04	130	49	189	—	367	65	7	72
1976	1,141	—	157	1,298	610.0	.9	535	2.47	149	47	280	—	474	51	9	60
1977[3]	1,453	—	86	1,539	758	.2	696	3.17	174	44	378	—	595	90	8	97
1978	1,282	—	85	1,367	661		620		189	42	446					
1979	1,423	—	86	1,509	728		659		180	27	420					
1980	1,191	—	122	1,313	710		523		189	24	449					
1981[1]	1,551	—	80	1,631	847		680		132	26	382		603			
1982[2]	1,133	—	104	1,237	546		602		167	22	402		634			
1983[2]	705	—	90	795	275		470		142	31	444					

[1] Preliminary. [2] Estimate. [3] Data prior to 1977 are for Crop Yr. beginning Aug. 1. *Source: Economic Research Service, U.S.D.A.* T.201

U.S. Consumption of Cottonseed Oil in End Products[1] In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1974–5	57.2	52.5	58.3	62.1	61.5	60.5	57.9	58.1	56.0	66.7	53.8	56.8	698.4
1975–6	49.6	46.7	51.0	50.0	53.6	45.0	48.3	52.1	48.3	43.3	58.0	39.3	585.2
1976–7	51.2	45.0	43.7	56.6	48.0	47.9	47.8	55.7	56.7	56.1	56.2	45.9	610.8
1977–8	51.8	48.6	47.5	52.6	58.5	50.0	52.3	55.6	55.7	63.4	65.9	62.3	664.2
1978–9	60.0	57.3	55.6	64.6	54.6	55.9	57.0	60.9	48.9	64.8	45.9	41.0	666.5
1979–0	53.9	43.1	44.9	50.8	51.1	55.6	56.4	56.6	58.6	68.2	65.1	57.9	662.2
1980–1	65.5	55.6	57.5	51.8	49.5	38.0	44.5	47.1	44.2	50.6	48.0	39.0	591.3
1981–2	43.4	46.5	44.8	58.6	55.0	45.7	40.3	56.8	51.7	56.0	52.5	42.2	593.5
1982–3[2]	54.1	50.4	47.3	56.1	60.0	49.0	53.2	52.0	53.0	56.6	59.1	54.7	645.5
1983–4[2]	54.3	42.4	39.7	46.8	46.9	47.5	55.5						

[1] Includes small amount exported but does not include imported oil. [2] Preliminary. *Source: Bureau of the Census* T.206

U.S. Exports of Cottonseed Oil (Crude & Refined) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	28.8	79.0	52.3	56.3	94.2	52.2	49.5	36.7	24.2	24.1	33.8	75.1	606.1
1975	78.4	67.3	96.6	56.8	92.6	17.8	69.7	43.7	28.9	21.3	46.7	36.7	656.5
1976	76.2	49.3	51.8	42.8	65.6	47.9	23.7	24.4	13.4	33.6	15.7	76.6	520.9
1977	50.4	80.5	104.2	72.4	23.0	58.3	57.4	52.5	65.5	35.4	64.2	67.2	731.2
1978	50.6	68.2	84.9	61.6	59.8	63.5	70.2	50.0	82.3	25.9	29.2	82.5	728.8
1979	56.7	71.2	89.9	51.3	52.5	63.1	63.8	18.1	56.6	34.0	48.9	27.0	633.0
1980	34.8	28.1	110.5	71.0	105.0	31.4	70.3	77.6	89.3	53.7	66.6	47.1	785.4
1981	77.0	29.3	66.7	82.1	72.2	85.7	46.9	35.9	46.5	42.2	37.4	80.5	702.3
1982[1]	41.2	146.2	110.6	68.6	74.5	67.0	63.7	47.3	68.4	52.2	60.0	54.7	854.4
1983[1]	41.8	58.8	97.0	25.8	53.0	23.8	42.5	15.5	20.6	10.5	18.4		

[1] Preliminary. *Source: Dept. of Commerce* T.205

U.S. Stocks of Cottonseed Oil (Crude & Refined) at End of Month In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1974–5	121.4	109.8	123.2	166.9	177.4	197.6	210.2	188.1	208.0	173.1	164.0	146.2
1975–6	126.4	136.1	125.6	153.1	160.3	179.6	192.1	217.1	198.0	204.0	153.6	157.5
1976–7	135.9	104.9	115.5	167.2	191.6	220.7	247.0	251.4	240.3	228.1	194.9	163.2
1977–8	131.5	85.9	97.7	119.7	142.3	151.4	156.4	176.4	180.4	154.5	130.7	106.7
1978–9	102.3	84.8	101.4	123.0	127.1	152.2	152.9	141.0	143.1	141.0	139.5	116.9
1979–0	117.2	86.4	93.1	129.0	144.3	173.2	198.9	212.8	188.7	165.8	167.1	144.6
1980–1	138.6	121.9	122.5	152.8	170.1	183.5	200.1	202.4	165.9	160.1	121.7	113.0
1981–2	109.4	80.0	102.6	127.2	133.1	165.7	148.3	152.0	160.1	147.8	144.5	154.1
1982–3[1]	115.2	103.6	121.1	148.8	172.2	175.3	175.1	158.1	164.6	130.4	113.6	108.9
1983–4[1]	96.7	89.6	82.5	108.6	144.6	152.5	155.5					

[1] Preliminary. *Source: Bureau of Census* T.203

Currencies

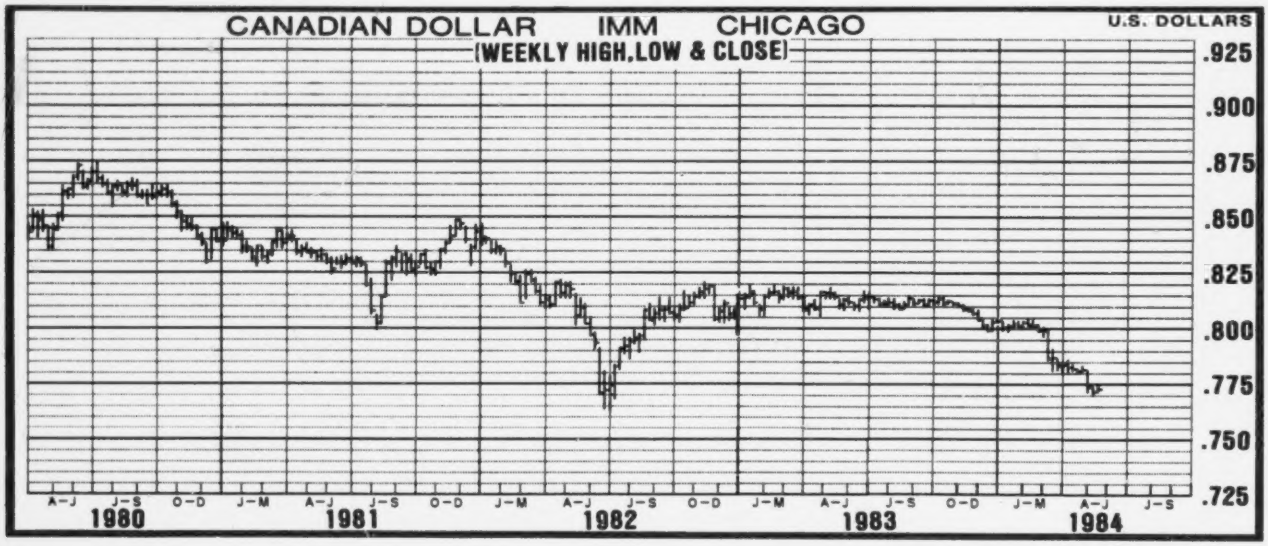
In 1983, the U.S. dollar gained 15 percent on the Deutschemark, 24 percent on the French franc, 11 percent on the British pound, and 10 percent on the Swiss franc. At the same time, the dollar achieved near-record high levels against the British pound, the French franc and the Italian lira. In August 1983, the dollar moved up to a 9½ year high against the Deutschemark—a record high when figured on a trade weighted basis. At the end of 1983, the dollar was trading at about 235 yen, a value that represented a dollar appreciation of nearly 16 percent since the end of 1980 and almost 30 percent since the end of 1975. These currency developments tended to discourage U.S. commodity exports and to encourage imports.

The dominant factor affecting the dollar's marked appreciation during 1983 was the high interest rates payable on dollar deposits overseas. Low rates of inflation in the U.S., added to expectations that the rate of inflation would continue subdued, caused the real rate of return on dollar holdings to be the highest of any major currency. At the same time, Federal Reserve monetary policy had been restrictive during most of 1983, thus giving rise to expectations of continued high U.S. interest rates. The borrowing requirements of the Treasury due to the size of the federal deficit put additional upward pressure on interest rates.

At the beginning of 1984, however, the dollar began to show signs of a retreat from the surging high levels of 1983. Many economists believed that the U.S. economic recovery of 1983 would eventually slow down, bringing about pressure for easier money and a weakened dollar. Interest rates also began to ease. The London interbank offered rate (LIBOR) on 3-month dollar deposits fell from 10.3 percent to just above 9.5 percent in the last quarter of 1983. Forward markets for the yen narrowed to the extent that the interest rate advantage of the dollar was eroded.

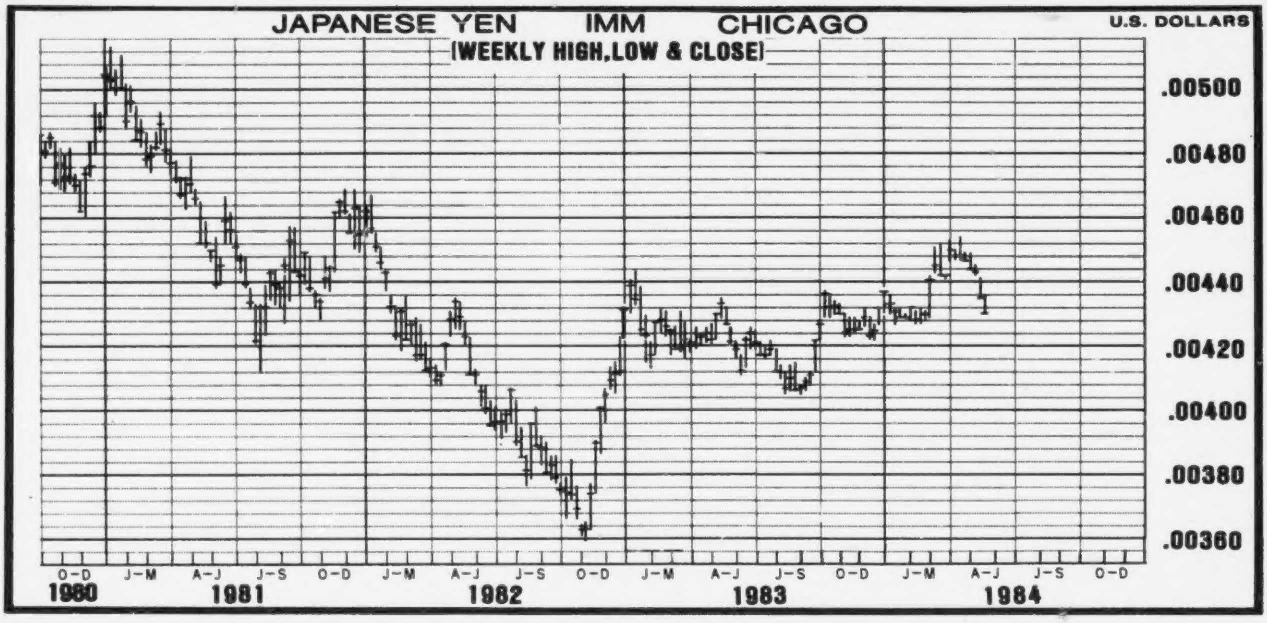
However, the outlook for the U.S. economy remained strong in the last part of 1983, and the only currency to advance significantly over the dollar in the third quarter was the yen. Late in 1983, the yen benefited from the currency market's perception that the Bank of Japan was committed to defending the yen. Bank of Japan Governor Mayekawa reportedly stated that exchange rates were an important consideration in the timing of a ½ percent discount rate cut which took place in October 1983 in conjunction with the announcement of a six-point economic stimulus package. U.S. authorities also purchased yen in a joint operation with the Japanese central bank. As of November 1983, U.S. authorities' interventions in foreign exchange markets in the last half of 1983 amounted to $283.6 million equivalent, split equally between the Treasury and the Federal Reserve. Of this amount, $101.0 million equivalent was in yen and $182.6 million equivalent was in Deutschemarks.

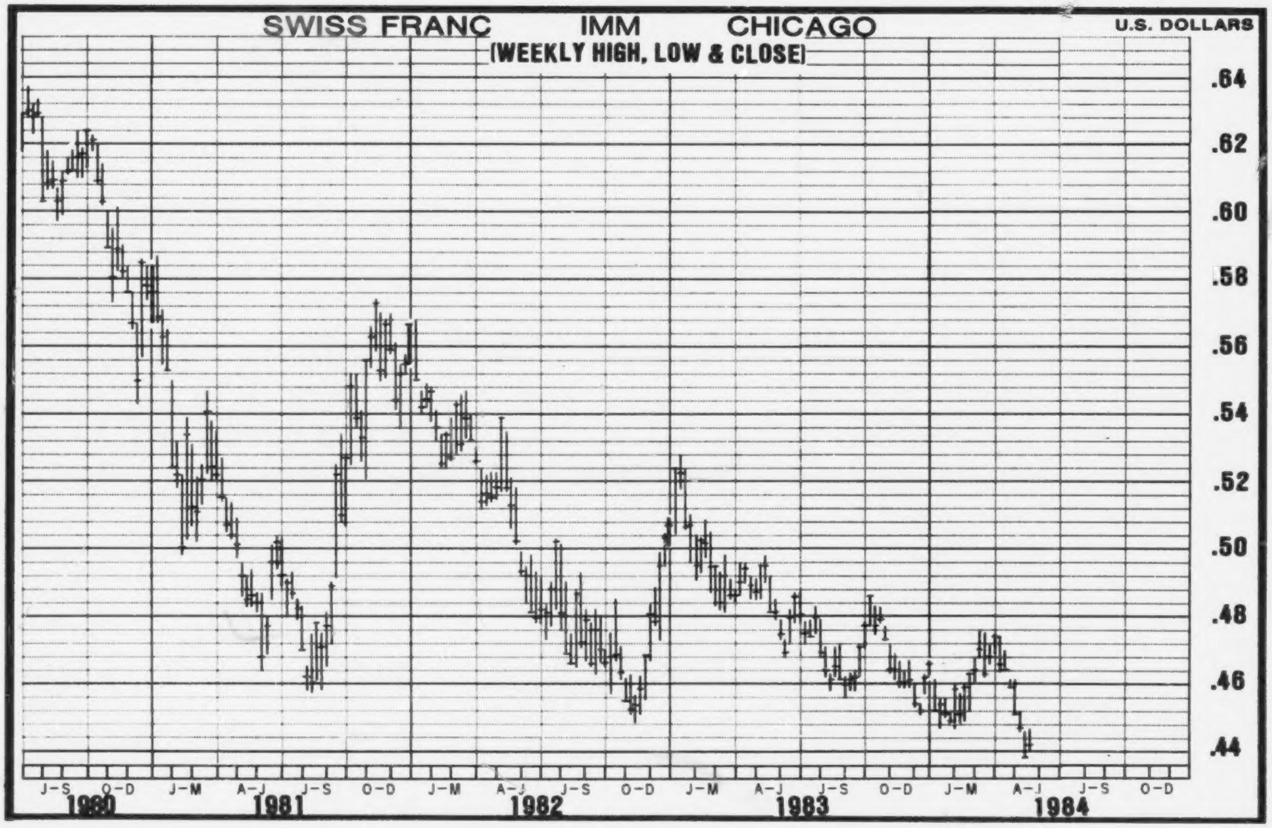
The dollar gained additional strength from the shaky international debt situation that prevailed during 1983. The value of the dollar was boosted by the demand for dollars from countries, such as Mexico and Brazil, that owed large sums of money to the U.S. In the third quarter of 1983, Mexico fully repaid the remaining portion of its special combined credit facility. Drawings of $395.3 million and $214.8 million were repaid to the Treasury and the Federal Reserve, respectively, and the credit facility then expired. This credit, which had originally consisted of a total of $925 million from the Treasury and the Federal Reserve, was provided in cooperation with other central banks, which together extended credit to the Bank of Mexico totaling $1.85 billion. Throughout much of 1983, the Treasury had participated with other nations in providing liquidity support to the Bank of International Settlements (BIS) for credit facilities that the BIS provided to the Central Bank of Brazil and the



National Bank of Yugoslavia. This support came from the Treasury through the Exchange Stabilization Fund (ESF).

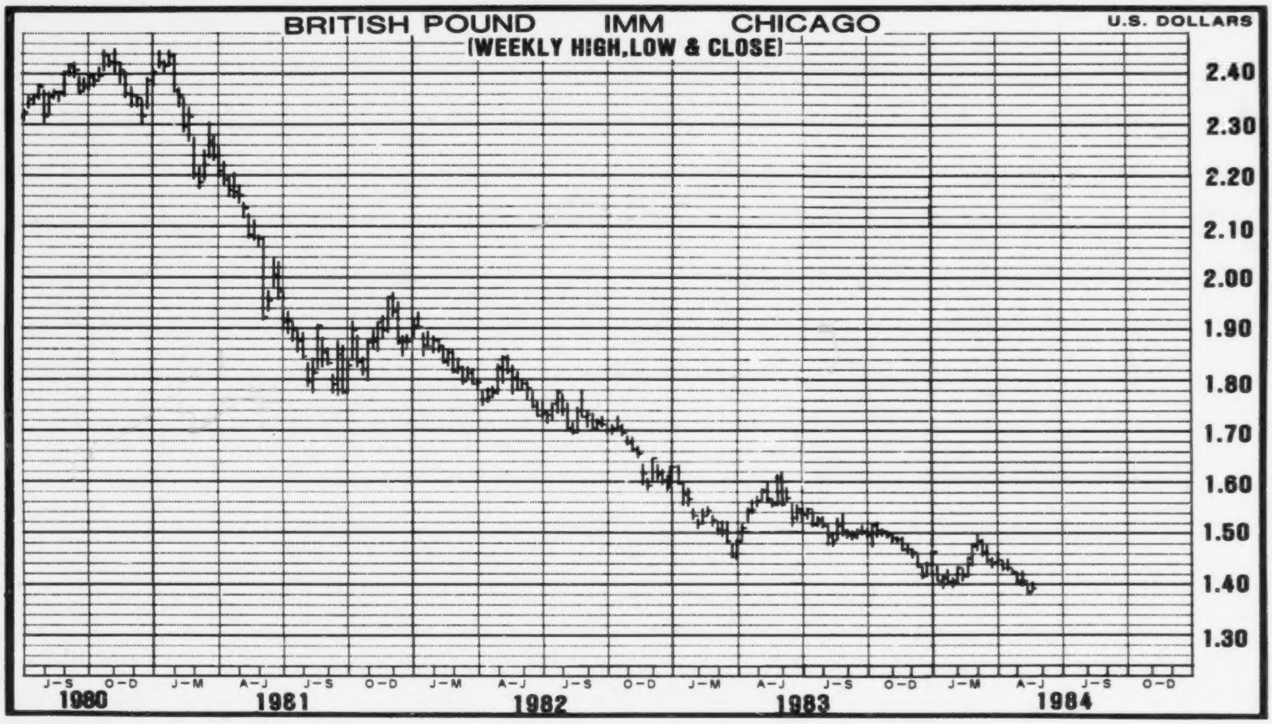
Japan's inflation rate is expected to be the lowest in any industrial nation during 1984, despite a slight rise in anticipated unemployment. Japanese exports are likely to increase substantially during the year. West Germany is expected to show a modest economic recovery despite continued restrictive fiscal and monetary policies aimed at holding consumer price increases in the 3 percent range. Both monetary and fiscal policy in the United Kingdom are expected

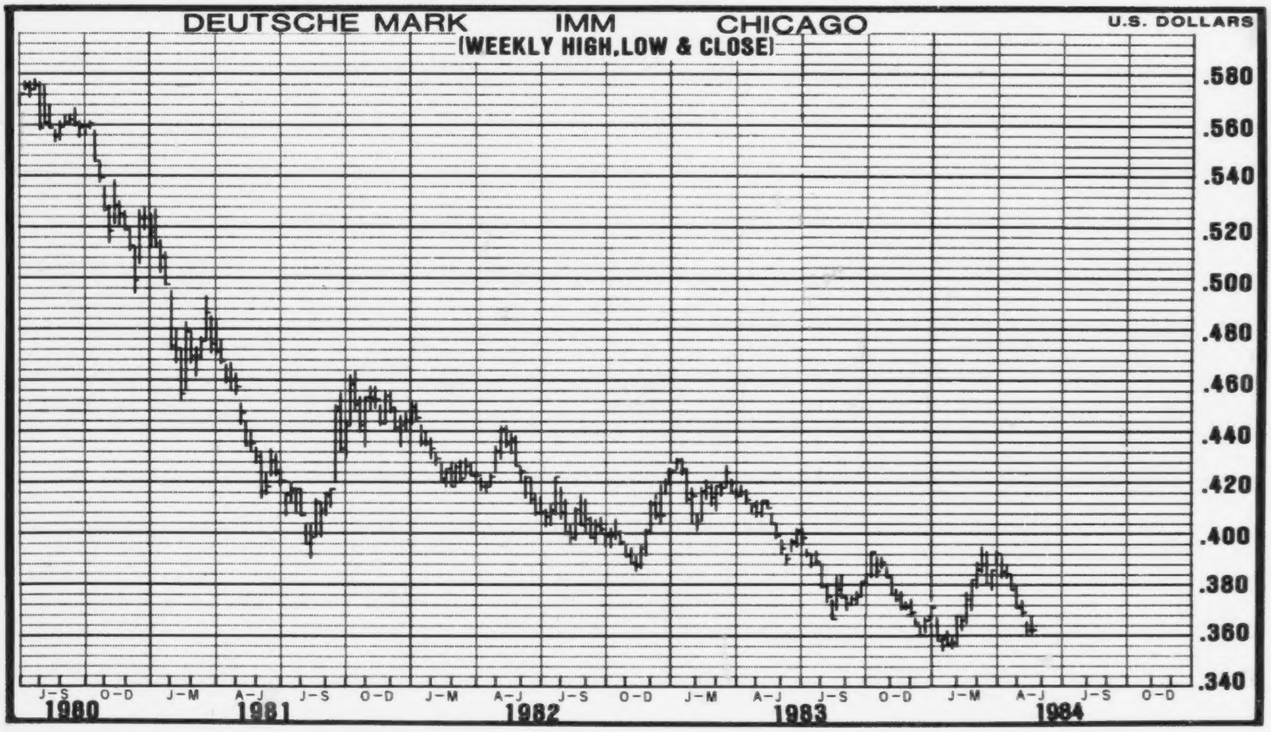




to also be somewhat tighter in 1984 with consumer prices increasing at 5–5¼ percent.

The International Monetary Market of the Chicago Mercantile Exchange lists futures contracts in the British pound, Canadian dollar, Deutschemark, Dutch guilder, French franc, Japanese yen, Swiss franc, and Mexican peso.





Distilled Spirits

Salient Statistics of Distilled Spirits in the United States In Thousands of Gallons[1]

Fiscal Year[4] Ending Sept. 30	Whiskey					All Distilled Spirits				
	Production	Tax-Paid Withdrawals	Imports For Consumption[2]	Stocks End of Period	Bottled For Consumption	Production	Tax-Paid Withdrawals	Imports For Consumption[2]	Stocks End of Period	Bottled For Consumption
1971	127,220	111,972	89,290	960,509	186,050	759,251	256,999	102,140	1,162,398	310,056
1972	126,274	120,794	87,690	958,386	195,819	764,351	281,584	100,160	1,107,557	335,482
1973	111,974	135,937	92,300	926,112	188,245	859,152	282,840	107,280	1,060,634	336,813
1974	92,599	138,105	93,920	875,742	184,296	821,577	292,428	110,980	1,006,206	348,776
1975	49,958	136,950	94,980	779,762	181,683	717,550	295,445	113,460	950,044	356,916
1976	79,178	134,773	92,070	722,884	178,701	667,682	304,491	112,710	873,632	369,346
1977[4]	81,828	125,878	91,150	678,682	165,751	656,128	295,845	112,990	810,948	360,697
1978	79,150[2]	125,977	101,890	624,886	175,970	166,610[2]	321,294	128,600	759,592	443,460[2]
1979[3]	101,260[2]	124,544	95,400	608,060	164,544	186,680[2]	317,764	123,650	670,360	447,520[2]
1980[3]	84,310[2]		86,000	565,610		140,530[2]		113,710	625,830	449,420[2]
1981[3]	96,680[2]		86,530	543,600		152,030[2]		117,930	612,740	449,450[2]
1982[3]	91,250[2]		76,600	539,590		138,070[2]		106,020	604,930	437,660[2]
1983[3]	75,000[2]		81,270	523,000		122,000[2]		113,770	590,450	402,000[2]

[1] Production, withdrawals, and stocks are tax gallons; imports are proof gallons; consumption are wine gallons. [2] Data are for CALENDAR YEARS. [3] Preliminary. [4] Fiscal year ending JUNE 30 PRIOR TO 1977. *Sources: Internal Revenue Service; Department of Commerce* T.207

Distilled Spirits Bottled for Consumption in the U.S. In Millions of Wine Gallons[1]

Fis. Yr. End. Sept. 30[1]	Whiskey	Brandy	Rum	Gin	Cordials & Liqueurs	Vodka	Alcohol & Spirits	Other Spirits	Total
1971	186.050	11.913	2.864	35.042	20.555	52.407	.148	1.078	310.056
1972	195.819	13.053	3.378	38.009	23.311	60.116	.146	1.649	335.482
1973	188.245	13.908	4.693	35.890	25.095	66.494	.144	2.344	336.813
1974	184.296	13.855	5.495	37.319	28.391	75.285	.155	3.979	348.776
1975	181.683	13.483	6.791	37.169	30.416	82.159	.180	5.035	356.916
1976	178.701	14.150	8.789	39.242	34.189	88.459	.296	5.519	369.346
1977[2]	165.751	14.660	11.147	37.055	35.822	89.833	.256	6.173	360.697
1978	175.970	14.451	13.952	39.938	32.541	94.152	.214	6.620	389.654
1979	164.544	13.695	18.647	36.665	32.324	92.909	.238	6.700	377.161
1980									

[1] A "wine gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. [2] Fiscal year ending JUNE 30 PRIOR TO 1977. *Source: Internal Revenue Service* T.208

Grains Used in Production of Alcohol, Dist. Spirits, & Ferm. Malt Liquors in U.S. In Thousands of Bushels

Year Begin. July 1	Corn and Products			Barley and Malt			Wheat				
	Alcohol & Distilled Spirits	Fermented Malt Liquors[3]	Total	Alcohol & Distilled Spirits	Fermented Malt Liquors	Total	Alcohol & Distilled Spirits	Fermented Malt Liquors	Total	Rye[2]	Sorghum Grains
1964–5	27,704	39,467	67,171	6,181	88,692	94,873	68	9	77	3,801	3,493
1965–6	29,830	40,688	70,518	7,064	90,340	97,404	66	8	74	4,393	3,062
1966–7	32,627	40,658	73,285	6,812	96,204	103,016			75	4,663	2,786
1967–8	33,980	40,247	74,227	7,101	97,350	104,451				4,744	2,809
1968–9	33,024	41,537	74,561	6,968	100,956	107,924				4,681	3,372
1969–0	31,202	43,121	74,333	6,669	109,512	116,181				4,279	2,963
1970–1	24,030	45,251	69,281	4,338	108,201	113,039				3,435	3,716
1971–2	24,848	45,441	70,289	4,496	113,209	117,705				3,066	4,750
1972–3	29,498	45,257	74,755	4,193	114,608	118,801					2,025
1973–4[1]	33,095	46,978	80,073	3,659	121,892	125,551					2,515
1974–5											

[1] Preliminary. [2] Used principally for distilled spirits. [3] Principally corn grits & flakes. *Source: Internal Revenue Service* T.209

Eggs

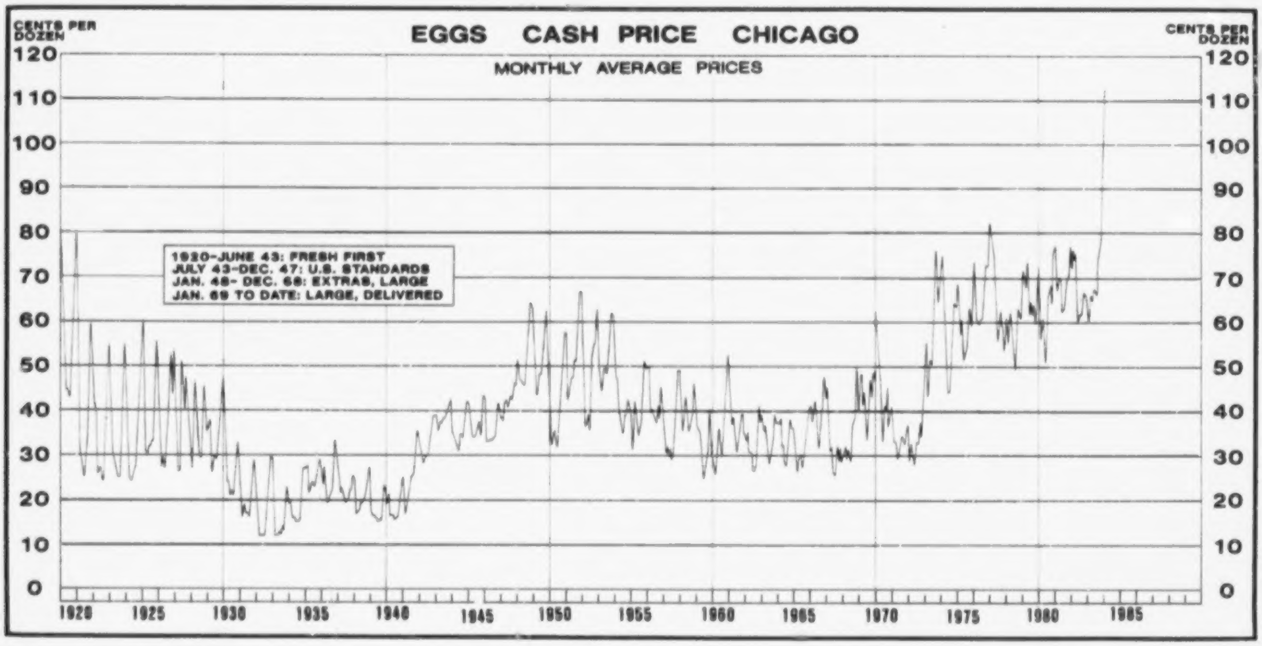
U.S. egg production in calendar year 1983 totaled 5.7 billion dozen, down 2 percent from 1982. The 1983 production continued a decline that began in 1981. Egg producers had not enjoyed a sustained period of profitable operation since 1979, and many resorted to cost-cutting methods. One of the most commonly used methods for reducing costs had been keeping old hens in the laying flock for more than one laying cycle instead of selling the spent birds. This reduced the need for pullets as replacements in flocks. Because of sharply increased grain prices due to the 1983 PIK program and the summer drought, producers saw their profit margins squeezed between rising feed ingredient prices and only modest increases in the prices of eggs. Consequently, producers tended to keep only their most productive hens. In the third quarter of 1983, the average number of layers on hand was 4 percent below the average during the comparable period of 1982. In mid-1983, egg production declined only 2 percent because producers had sold their less productive hens, thus increasing the rate of lay 2 percent above 1982.

In the last quarter of 1983, egg production declined 4 percent from a year earlier, while the rate of lay was steady. The decline in production was partly attributed to an outbreak of avian influenza, which resulted in nearly 5 million layers being destroyed before the end of the year. However, as egg prices improved slightly, some producers outside quarantine areas begin selling fewer of their less productive old hens, and the number of hens during December was down just 3 percent compared to the previous year. At the same time, unusually cold weather and the holding of increased numbers of old hens caused the rate of lay to be down.

Early in 1984, the hatch of egg-type chicks was 11 percent above 1983. Producers ordered more replacement pullets because of higher egg prices and in order to replace hens lost to avian flu. Because 5 to 6 months are required for replacements to begin laying, it was thought that the number of pullets would not be sufficient to expand layer numbers until mid-year.

During fourth-quarter 1983, cartoned Grade A Large eggs in New York averaged 91 cents per dozen, up from 68 cents in 1982. This price represented the highest fourth-quarter price since 1960. Egg prices at the end of 1983 were strengthened by the demand for breaker eggs. Breakers usually take surplus eggs at a discount in order to build stocks for the prime baking season in the fall. However, recent reduced supplies caused breakers to compete with retailers for breaking stock. As of the beginning of 1984, stocks of frozen eggs in commercial warehouses were 55 percent below a year earlier.

Prices for cartoned Grade A Large eggs in New York were quite strong in the first quarter of 1984. These prices were estimated to have averaged $1.03 to $1.07 per dozen, up from 66 cents in the comparable period in 1983. The effects of avian influenza and of cold weather contributed to smaller flocks and decreased output. Prices for cartoned Grade A eggs in New York are expected to average 88 to 92 cents per dozen by the third quarter of 1984, up from 69 cents in 1983. Reduced supplies should continue to contribute to price strength. Exports and breaker activity should be minimal. Increasing production should begin to weaken egg prices slightly in the last half of 1984. Prices for cartoned Grade A eggs could average around 80 cents per dozen compared with 82 cents in 1983. More replacement pullets were expected to gradually replenish the laying flock in the last half of the year.



EGGS

World Production[2] of Eggs In Billions of Eggs

Year	Argentina	Australia	Bel. & Lux.	Brazil	Canada	Israel	France	W. Germany	Italy	Japan	Netherlands	Poland	Spain	South Africa	USSR	Un. Kingdom[3]	United States
1975	3.8	3.4	3.7	6.0	5.4	1.7	13.1	15.0	11.4	29.8	5.3	8.0			57.4	13.6	64.4
1976	3.7	3.2	3.5	6.1	5.2	1.8	12.9	14.4	11.5	31.0	5.6	8.0			55.6	14.0	64.8
1977	3.1	3.3	3.8	6.3	5.5	1.7	13.1	14.8	11.3	31.4	6.0	8.5	10.9	3.9	61.2	14.1	64.9
1978	3.3	3.5	3.8	6.6	5.5	1.8	13.5	14.3	11.0	32.8	7.0	8.5	10.1	3.9	64.5	14.3	67.3
1979	3.4	3.4	3.5	7.2	5.6	1.8	13.8	13.3	11.0	33.2	8.2	8.7	11.0	3.1	65.6	15.0	69.2
1980	3.4	3.4	3.3	9.6	5.9	1.6	14.5	13.7	10.7	33.4	9.0	8.9	11.7	2.4	70.9	14.0	69.7
1981	3.3	3.6	3.3	10.2	5.9	1.3	15.2	13.2	11.4	33.4	9.8	8.8	11.8	2.6	72.2	13.7	69.9
1982[1]	3.2	3.5	3.3	10.3	5.8	1.6	16.1	13.4	11.2		10.6	7.6	11.4	2.8	73.0	13.2	69.6
1983[4]				9.0			—— EC-10(70.3) ——						12.3		74.7		67.9

[1] Preliminary. [2] Relates to farm production in Canada and the United States. Information for many countries is not explicit on this point. [3] Farm production, years ending May. [4] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.210

Salient Egg Statistics in the United States

Year	Hens & Pullets: On Farms Dec. 1[2] (Millions)	Hens & Pullets: Avg.[9] Number During Year (Millions)	Rate of Lay Per Layer During Year[3] Number	Eggs: Farm Prod. (Billions)	Eggs: Price Per Dz.	Eggs: Consumed[4] on Farms (Billions)	Eggs: Sold (Billions)	Gross Income[5] Billion $	Total Egg Prod.[6] (Million Dozen)	Imports[7] (Million Dozen)	Exports[8] & Shipments (Million Dozen)	Used for Hatching (Million Dozen)	Civilian Consumption: Total (Million Dozen)	Civilian Consumption: Per Capita Eggs
1975	279.7	278.1	232	64.6	52.4	.54	64.09	2.82	5,382	5	62	372	4,924	276
1976	279.8	274.1	235	64.5	58.3	.50	64.01	3.13	5,377	3	65	419	4,857	270
1977	286.7	274.9	235	64.6	55.6	.48	64.13	2.99	5,408	14	91	427	4,865	268
1978	293.3	281.5	239	67.1	52.2	.46	66.68	2.92	5,608	11	120	466	5,009	273
1979	294.9	288.6	240	69.2	58.3	.45	68.76	3.36	5,777	10	104	498	5,162	278
1980	294.2	287.7	242	69.7	56.3	.45	69.23	3.27	5,806	7	167	499	5,122	272
1981	293.5	287.7	243	63.1	63.1	.44	69.38	3.67	5,822	3	257	507	5,040	266
1982[1]	289.0	286.3	243	69.7	59.5	.43	69.27	3.46	5,798	3	185	506	5,085	265
1983[1]	278.2	276.1	247	68.1	62.0	.42	67.69	3.46	5,655	23	180	500	4,950	262

[1] Preliminary. [2] Of laying age. [3] Number of eggs produced during the year divided by the average number of hens & pullets of laying age on hand during the year. [4] Consumed in households of farm producers. [5] Value of sales plus value of eggs consumed in households of producers. [6] Farm production, plus nonfarm output estimated at 10% of farm through 1954; thereafter, 1 percentage point less each year. [7] Shell-egg equivalent of eggs and egg products. [8] Shell eggs & shell equivalent of frozen & dried egg products. [9] Average number of layers on farms during the year. *Source: Agricultural Marketing Service, U.S.D.A.* T.211

Average Wholesale Prices of Shell Eggs (Large) Delivered, Chicago In Cents Per Dozen

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	63.7	57.4	60.7	51.6	51.3	51.7	53.9	59.7	63.3	59.1	66.8	73.8	59.4
1976	70.9	64.2	59.5	58.6	60.7	60.9	65.4	70.6	72.8	70.6	76.7	82.3	67.8
1977	78.7	75.6	67.5	62.4	55.7	57.0	62.8	59.3	59.3	53.7	55.0	61.5	62.4
1978	55.2	62.8	62.0	57.0	52.0	49.3	61.2	61.8	63.2	60.8	67.2	71.6	60.3
1979	71.3	67.7	73.5	68.7	61.9	64.8	61.9	64.0	62.0	59.7	66.3	72.4	66.2
1980	59.9	56.3	60.6	56.8	50.8	54.6	63.2	65.9	68.8	64.3	75.7	77.3	62.8
1981	71.4	67.2	66.6	69.7	62.2	62.9	67.5	68.7	70.7	71.3	77.3	72.1	69.0
1982	76.2	74.2	75.2	68.3	60.4	60.8	61.7	61.6	65.9	66.8	66.2	64.1	66.8
1983[1]	60.2	62.7	66.2	64.9	68.4	68.0	66.2	74.4	76.2	77.9	88.4	98.6	72.7
1984[1]	112.3												

[1] Preliminary. *Source: Commodity Economics Division, U.S.D.A.* T.212

Total Egg Production in the United States In Millions of Eggs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[2]
1977	5,447	4,917	5,546	5,361	5,478	5,213	5,310	5,369	5,318	5,592	5,534	5,803	64,602
1978	5,743	5,106	5,700	5,559	5,723	5,460	5,541	5,574	5,495	5,751	5,685	5,948	67,157
1979	5,892	5,290	5,909	5,721	5,862	5,648	5,798	5,810	5,653	5,881	5,797	6,064	69,209
1980	6,048	5,593	5,955	5,714	5,799	5,584	5,706	5,750	5,724	5,950	5,798	6,055	69,684
1981	6,022	5,424	6,009	5,761	5,855	5,609	5,799	5,834	5,685	5,919	5,856	6,079	69,827
1982	5,958	5,333	——17,557——			——17,231——			——17,419——			6,012	69,706
1983[1]	5,914	5,353	5,928	5,622	5,710	5,530	5,654	5,635	5,501	5,683	5,566	5,767	68,108
1984[1]	5,672	5,328	5,798										

[1] Preliminary. [2] Dec. 1 previous year thru Nov. 30. *Source: Crop Reporting Board, U.S.D.A.* T.219

Total Eggs—U.S. Supply and Distribution In Millions of Dozen

	Supply				Utilization					
							Domestic Disappearance			
									Civilian[1]	
Year & Quarters	Production	Imports[1]	Beginning Stocks[1]	Total Supply	Ending Stocks[1]	Exports & Shipments[1]	Eggs Used for Hatching	Military	Total	Per Capita (Number)
1978 I	1,379	1.3	23.7	1,404	18.1	37.4	113.8	6.6	1,228	67.1
II	1,396	3.3	18.1	1,417	21.0	30.0	131.5	7.0	1,228	66.9
III	1,385	6.4	21.0	1,412	23.1	24.9	104.3	7.4	1,253	68.1
IV	1,449	.1	23.1	1,472	20.3	28.0	116.0	6.9	1,301	70.5
1979 I	1,424	.4	20.3	1,445	16.7	24.4	125.4	5.8	1,273	68.8
II	1,436	2.2	16.7	1,455	18.1	22.7	135.3	7.0	1,272	68.5
III	1,438	4.2	18.1	1,461	19.2	25.4	119.2	6.4	1,291	69.3
IV	1,479	2.7	19.2	1,500	18.9	31.2	117.7	6.0	1,327	71.1
1980 I	1,466	.2	18.9	1,485	18.4	35.8	127.4	6.4	1,298	69.3
II	1,425	1.6	18.4	1,445	23.2	37.3	128.7	5.7	1,250	66.6
III	1,432	1.9	23.2	1,457	23.7	39.5	119.9	6.7	1,267	67.3
IV	1,483	1.3	23.7	1,508	19.4	53.9	123.1	5.3	1,307	69.2
1981 I	1,455	− .9	19.4	1,456	17.9	56.2	128.0	5.6	1,266	67.0
II	1,463	1.3	17.9	1,462	19.6	61.7	135.2	6.1	1,259	66.5
III	1,432	2.5	19.6	1,434	19.9	57.7	123.8	6.1	1,247	65.7
IV	1,451	.5	19.9	1,453	17.5	74.0	119.4	6.6	1,254	65.9
1982[3] I	1,442	.5	17.5	1,445	14.4	53.1	128.4	5.9	1,258	65.9
II	1,441	.3	14.4	1,437	18.2	36.9	132.4	4.8	1,263	66.0
III	1,437	1.6	18.2	1,434	22.3	37.6	120.3	6.4	1.270	66.2
IV	1,479	.1	22.3	1,481	20.3	57.3	124.4	5.3	1,294	67.3
1983[3] I	1,433	5.0	20.3	1,439	19.4	30.2	128.3	6.3	1,274	66.1
II	1,405	2.9	19.4	1,409	18.7	29.2	129.4	6.9	1,243	64.4
III	1,399	.7	18.7	1,405	13.2	26.7	120.2	6.5	1,252	64.6
IV	1,418	8.2	13.2	1,439	17.6		122.3	5.4		

[1] Shell eggs & the approx. shell-egg equivalent of egg product. [2] Less than 100,000 dozen. [3] Forecast.
Source: Commodity Economics Division, U.S.D.A. T.213

Shell Eggs: Civilian Per Capita Disappearance in the United States Number of Eggs

	Shell Equivalent														
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]	Processed[2]	Total
1975	22.0	19.4	21.9	20.4	20.6	19.2	20.1	20.6	19.9	20.9	20.9	21.7	248	31	279
1976	21.7	19.6	20.5	19.6	20.5	19.2	20.1	20.1	19.3	20.3	19.5	20.8	241	33	274
1977	20.9	17.9	20.1	19.2	19.4	18.1	19.1	19.1	19.0	20.7	20.2	21.4	235	37	272
1978	21.1	18.6	20.8	20.0	20.3	18.8	19.7	19.8	19.7	20.9	20.7	21.9	242	36	278
1979	21.3	18.5	21.0	20.0	20.1	19.2	20.1	19.9	19.8	20.2	20.2	21.8	242	36	278
1980	21.1	19.0	20.9	19.4	19.8	18.7	19.0	19.6	19.4	19.8	20.0	20.7	237	35	272
1981		58.7			58.6			56.5			58.5		232	33	265
1982[3]		58.6			57.1			56.6			59.0		231	34	265
1983[3]		57.7			55.3			54.6							
1984															

[1] Monthly totals do not necessarily add to yearly figures due to rounding. [2] Liquid, frozen, & dried egg (egg solids) converted to shell egg equivalent. [3] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.214

Egg-Feed Ratio[1] in the United States

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	7.2	7.2	7.6	6.5	6.5	6.3	6.4	6.8	7.5	7.1	8.1	9.0	7.2
1976	8.6	8.2	7.4	7.3	7.5	6.8	6.8	7.6	7.7	7.8	8.7	9.1	7.9
1977	8.5	8.1	7.3	6.8	5.9	5.8	6.7	7.2	7.6	7.1	7.3	7.4	7.1
1978	6.7	7.5	7.4	6.7	6.3	5.6	6.4	7.0	7.3	7.0	7.5	8.0	7.0
1979	7.8	7.7	8.0	7.4	6.9	6.7	6.1	6.1	6.4	6.1	6.8	7.3	6.9
1980	6.6	6.0	6.4	6.0	5.4	5.6	5.7	6.0	6.2	5.7	6.0	6.6	6.0
1981	5.9	5.7	5.6	5.9	5.2	5.2	5.5	5.8	6.4	6.5	7.2	6.7	6.0
1982	6.6	6.8	7.2	6.6	5.6	5.3	5.7	5.3	6.0	6.3	6.3	6.0	6.2
1983[2]	5.7	5.8	6.2	5.8	6.1	5.9	5.7	6.1	6.0	6.3	6.9	7.6	6.2
1984[2]	8.8	8.6											

[1] Pounds of laying feed equivalent in value to one dozen eggs. [2] Preliminary. *Source: Commodity Economics Division, U.S.D.A.* T.215

EGGS

Hens and Pullets of Laying Age in the U.S., First of Month In Millions

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1978	287.7	283.7	280.7	279.7	278.2	277.3	275.0	275.2	279.0	283.9	288.3	293.3
1979	291.7	292.1	290.2	288.6	285.5	283.4	283.7	285.1	287.2	290.2	291.7	294.5
1980	296.0	293.2	288.6	285.3	280.8	279.4	279.9	282.2	287.8	291.7	292.8	294.2
1981	294.0	291.3	291.3	285.5	283.6	282.4	280.0	283.7	283.8	286.3	289.7	293.5
1982	291.7	290.1	288.5	—	—	282.7	—	—	281.8	—	—	289.0
1983[1]	285.6	283.3	280.5	276.9	271.7	271.7	268.3	268.0	271.3	270.2	273.9	278.2
1984[1]	277.1	276.0	277.0	279.3								

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.216

Eggs Laid Per Hundred Layers in the United States In Number of Eggs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	2,009	1,808	2,035	1,993	2,061	1,979	2,016	2,012	1,954	2,011	1,955	2,033	23,867
1979	2,018	1,817	2,042	1,994	2,062	1,992	2,038	2,030	1,958	2,021	1,976	2,052	24,000
1980	2,053	1,922	2,075	2,019	2,070	1,997	2,030	2,017	1,975	2,036	1,975	2,055	24,224
1981	2,050	1,859	2,081	2,018	2,065	1,991	2,051	2,053	1,991	2,049	2,006	2,083	24,297
1982	2,048	1,850		6,159			6,112			6,105		2,094	24,368
1983[1]	2,079	1,899	2,127	2,045	2,097	2,043	2,096	2,084	2,025	2,071	2,008	2,077	24,651
1984[1]	2,051	1,825	2,085										

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.221

Egg-Type Chicks Hatched by Commercial Hatcheries in the United States In Millions

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	36.9	36.9	46.8	50.9	53.7	45.6	35.8	38.6	37.2	37.7	35.6	35.9	491.6
1979	39.9	39.5	50.1	52.4	55.9	47.8	42.8	41.9	36.6	39.5	37.5	36.4	519.0
1980	38.1	42.1	46.5	47.9	47.6	42.3	37.9	38.0	37.4	37.3	33.8	35.8	484.6
1981	37.8	36.1	44.5	48.3	46.1	40.5	32.3	33.8	32.3	35.9	33.7	33.1	454.2
1982	36.7	36.4	44.2	46.6	47.3	39.4	35.4	33.5	31.2	32.3	30.2	31.1	444.4
1983[1]	32.6	33.0	39.3	36.7	38.3	37.5	30.5	30.9	31.8	32.3	29.6	34.4	406.9
1984[1]	36.8	37.7	45.1										

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.220

U.S. Cold Storage Holdings of Shell Eggs, 1st of Month In Thousands of Cases (One Case = 30 Dozen)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	39	34	27	25	36	29	26	26	48	43	23	35
1979	38	22	18	24	20	27	24	32	28	31	24	24
1980	38	47	24	22	30	47	51	39	28	39	15	19
1981	31	28	18	31	31	25	41	39	20	19	21	38
1982	35	28	19	39	—	—	32	—	—	29	—	—
1983[1]	34	35	25	18	23	32	44	24	25	25	45	18
1984[1]	13	28	17	38								

[1] Preliminary. *Source: Crop Reporting, Board U.S.D.A.* T.217

U.S. Cold Storage Holdings of Frozen Eggs, 1st of Month In Millions of Pounds[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1977	26.1	26.9	24.9	24.6	25.3	28.0	31.4	35.1	35.4	33.7	33.4	31.2
1978	29.7	27.0	25.5	22.9	22.9	22.2	26.6	28.0	28.7	28.7	27.6	25.6
1979	25.3	25.5	24.5	21.1	21.7	21.6	22.8	25.9	24.7	24.1	25.6	23.4
1980	23.4	22.1	23.8	23.4	25.9	26.6	28.6	29.4	30.7	29.7	29.2	25.3
1981	24.3	24.3	24.2	22.3	21.9	22.7	24.2	26.9	27.2	25.5	25.6	23.7
1982	21.6	21.2	19.4	17.4	—	—	22.7	—	—	28.3	—	—
1983[2]	25.4	25.5	25.7	23.1	22.5	21.2	21.1	20.4	19.0	16.4	14.2	13.4
1984[2]	11.1	11.0	11.4	11.9								

[1] Converted on basis 39.5 pounds frozen eggs equals 1 case. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.218

Electric Power

Total electricity generation in 1983 was 2.3 trillion kilowatt-hours, 3 percent above total generation in 1982. Hydroelectric generation increased by 7.4 percent in 1983, coal-fired generation increased by 5.7 percent, and nuclear generation increased 3.3 percent. Natural gas-fired generation decreased 10.2 percent while petroleum-fired generation decreased 1.5 percent during the year.

Sales of electricity to all ultimate consumers in the U.S. in 1983 were 3.0 percent above sales in 1982. During 1983, sales increased to the residential sector by 2.7 percent, to the commercial sector by 3.3 percent, and to the industrial sector by 4.1 percent compared to 1982.

Steam-driven turbine generators produced more than 85 percent of the electricity used in the U.S. Shipments of conventional power boilers (those fired by coal, oil, and natural gas) ran at an estimated 64 million pounds of steam per hour in 1983. Shipments of conventional power boilers are expected to drop to the rate of 51 million pounds per hour in 1984 because of high generating reserves, high interest rates, and slow response to requested electric rate increases.

Utilities placed no new orders for nuclear steam-supply systems in 1983. Shipments of turbine-generator sets in 1983 were about 16,000 megawatts (MW); this was approximately the same as in the two preceding years, but was well below the average annual output of ten years earlier. Electric utilities purchased nearly all domestic production of conventional and nuclear steam-supply systems and turbine-generator sets. Conventional and nuclear-power boiler shipments are expected to total 144 million pounds of steam per hour in 1984.

During 1983, shipments by the transformer industry declined about 12.5 percent as measured in constant dollars. The downward trend in the demand for large power transformers continued through 1983. In January 1983, electric transformer manufacturers had 23.6 gigavolt-ampheres (GVA) scheduled for delivery in 1984 compared with 30.0 GVA scheduled for next-year delivery in January 1982.

World Electricity Production In Billions of KWH

Year	Australia	Brazil	Canada	Czechoslov.	France	W. Germany	Italy	Japan	Norway	Poland	Sweden	Switzerland	South Africa	Un. Kingdom	United States	USSR
1970	56.1		204.7	45.2	140.7		117.4	349.9	57.6	N.A.	60.6	33.2	50.8	249.2	1,640	740.9
1971	58.0		216.5	47.2	155.8		124.9	385.6	63.6	69.3	66.6	32.8	55.0	256.4	1,718	800.4
1972	60.9		240.2	51.4	170.9		135.3	428.5	67.6	76.5	71.7	31.3	59.1	263.6	1,853	857.4
1973	64.8		263.3	53.5	182.4		145.5	470.3	73.1	84.3	78.1	37.2	64.5	281.9	1,965	914.6
1974	69.8	72.4	280.3	56.0	188.2	311.7	148.9	459.0	76.7	91.6	75.1	37.4	70.1	273.1	1,967	975.8
1975	73.9	78.9	273.4	59.3	185.3	301.8	147.3	475.8	77.5	97.2	80.6	43.0	74.9	272.0	2,003	1,039
1976	76.6	90.0	294.0	62.7	203.1	333.6	163.5	511.8	82.1	104.1	86.4	36.2	79.4	276.9	2,123	1,111
1977	82.2	100.8	317.2	66.5	210.7	335.3	166.5	532.6	72.4	109.4	87.4	45.9	80.3	283.1	2,211	1,178
1978	86.2	112.5	335.7	69.1	226.7	353.4	175.0	564.0	81.0	115.6	90.3	42.3	84.5	287.7	2,286	1,200
1979	92.1	126.5	353.1	68.1	241.1	374.2	180.5	589.6	89.1	117.5	92.4	42.7	90.3	299.9	2,319	1,238
1980	96.3	139.5	366.7	72.6	243.3	368.8	185.7	577.5	84.1	121.9	93.4	46.6	95.0	284.9	2,356	1,295
1981	102.5	142.2	378.6	74.1	260.8	368.0	181.8	583.2	92.8	115.0	100.0	48.0	97.4	277.7	2,365	1,325
1982[1]	104.9	152.1	376.5	74.7	262.2	366.9	183.7	522.5	91.9	117.6	96.6	50.8	119.9	272.1	2,314	1,367
1983[2]	110.0		378.0	76.0	266.0	369.0	182.0	500.0	94.0	120.0	100.0	54.0	117.0	275.9	2,280	1,380

[1] Preliminary. [2] Estimate. *Source: United Nations*

T.222

Installed Capacity, Capability & Peak Load of the U.S. Electric Utility Industry In Millions of Kilowatts

Year	Installed Generating Capacity at Dec. 31										Capability at Winter Peak Load	Non-Coincident Winter Peak Load	Margin of Reserve (%)	Generation	Load Factor (%)
		Type of Prime Mover			Type of Ownership										
	Total Electric Utility Industry	Hydro	Gas Turbine & Steam[2]	Internal Combustion	Investor Owned	Cooperatives	Sub-Total Gov't.	Municipal Utilities	Federal	Power Districts, State Projects					
1971	367.4	55.9	259.7	4.5	286.9	5.4	75.1	21.8	39.7	13.7	366.7	261.7	20.9	1,617	63.2
1972	399.6	56.6	322.9	4.8	314.9	6.7	78.0	23.2	40.6	14.2	394.1	291.0	19.6	1,752	62.5
1973	439.9	61.8	352.1	4.9	346.5	7.3	86.1	25.0	44.5	16.6	433.2	295.1	20.8	1,869	62.0
1974	476.0	63.6	375.7	5.0	376.1	7.5	92.4	27.3	45.8	19.2	467.4	302.5	27.2	1,872	61.2
1975	508.9	65.9	397.6	5.1	399.0	9.1	100.2	28.8	50.1	21.3	492.5	331.1	34.3	1,920	61.4
1976	531.2	67.8	415.2	5.3	415.5	9.9	105.7	30.6	51.7	23.4	511.0	349.9	34.5	2,040	62.6
1977	560.4	63.8	436.4	5.3	438.4	10.9	111.1	34.3	53.2	24.6	537.6	360.2	30.2	2,132	61.4
1978	579.3	71.0	449.2	5.5	453.6	11.6	114.0	34.4	54.3	25.3	561.6	383.1	33.7	2,219	62.1
1979	598.4	75.4	463.0	5.5	464.1	13.8	120.5	34.5	58.3	27.6	554.3	368.9	36.9	2,247	64.4
1980	613.7	76.4	475.3	5.6	477.1	15.4	121.2	34.6	59.1	27.5	572.2	384.6	30.8	2,293	61.1
1981	635.0	77.2	491.3	5.6	490.8	18.4	125.7	35.1	61.0	29.5	581.1	391.1	33.6	2,311	61.6
1982[1]	650.0	78.1	503.8	5.1	499.1	21.5	129.5	35.8	62.5	31.2		373.3	39.3	2,259	62.1

[1] Preliminary. [2] Nuclear Power for 1971–82; 6.5, 8.7, 15.3, 21.1, 31.7, 39.8, 42.8, 49.9, 53.5, 54.6; 56.5; 60.8, 63.0. *Source: Federal Power Commission*

T.223

ELECTRIC POWER

Available Electricity & Energy Sales in the United States In Billions of Kilowatt Hours

Year	Generation						Sales to Ultimate Customers									
	Electric Utility Industry				Other Sources[2]	Total	Total Million $	Total[4]	Residential	Inter-Departmental	Commercial	Industrial	Street & Highway	Other Public Authorities	Railways & Railroads
	Hydro	Steam	Nuclear	Total[5]											
1971	266.3	1,302	38.1	1,613	103	1,716	24,725	1,466	479.1	4.9	333.8	592.7	11.7	39.8	4.5
1972	272.6	1,416	54.1	1,750	105	1,854	27,921	1,578	511.4	5.1	361.9	639.5	12.2	43.2	4.4
1973	271.6	1,495	83.3	1,856	103	1,959	31,663	1,703	554.2	5.5	396.9	687.2	12.8	42.3	4.2
1974	300.9	1,446	113.7	1,866	102	1,968	39,127	1,701	555.0	5.4	392.7	689.4	13.3	40.7	4.3
1975	300.1	1,439	172.5	1,918	85	2,003	46,855	1,733	586.1	5.4	418.1	661.1	13.9	43.6	4.3
1976	283.7	1,558	191.1	2,038	87	2,125	53,463	1,850	613.1	6.4	440.6	725.2	14.4	45.6	4.3
1977	220.4	1,648	250.9	2,124	88	2,212	62,610	1,951	652.3	7.2	469.2	757.2	14.4	46.2	4.2
1978	280.4	1,645	276.4	2,206	79	2,300	69,853	2,018	679.2	7.1	480.7	782.1	14.8	49.5	4.3
1979	279.8	1,708	255.2	2,247	71	2,318	78,640	2,084	695.0	7.4	494.7	817.6	14.8	49.6	4.3
1980	276.0	1,756	251.1	2,283	68	2,351	95,462	2,126	734.4	6.4	524.1	793.8	14.8	48.3	4.3
1981	260.7	1,759	272.7	2,295	70	2,365	111,016	2,151	730.5	6.2	521.7	819.6	14.7	53.7	4.2
1982[1]	309.2	164.7	282.1	2,241			121,127	2,094	729.2	5.4	514.1	770.7	14.2	55.7	4.3
1983[3]							137,000	2,230	795.0	5.7	550.0	800.0	14.0	55.0	4.3
1984															

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[1] Preliminary. [2] Includes generation of industrial and railway electric plants. [3] Estimate. [4] Also includes interdepartmental (averages about 600 million kwh). [5] Includes internal combustion. *Sources: Federal Power Commission; Edison Electric Institute* T.224

Electric Power Production by Electric Utilities in the U.S.[2] In Billions of Kilowatt Hours

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	145.6	131.3	141.4	130.7	133.7	150.5	153.9	154.2	145.9	139.5	138.9	148.0	1,714
1972	153.0	145.5	148.9	140.5	146.5	154.4	166.7	171.8	155.8	152.5	152.4	163.1	1,851
1973[2]	159.3	143.1	147.8	139.3	147.0	161.0	173.5	177.0	156.3	153.8	147.8	153.3	1,861
1974	156.9	142.4	149.9	141.9	153.4	156.0	177.9	173.8	152.2	151.9	149.8	159.5	1,867
1975	164.3	147.1	155.5	146.2	153.2	162.4	176.8	179.7	155.2	154.9	152.8	169.4	1,918
1976	178.3	156.7	164.2	153.2	157.4	173.4	186.4	186.4	165.0	163.7	169.1	183.9	2,038
1977	196.4	162.7	169.1	156.9	169.3	180.8	198.9	196.1	176.2	166.4	167.1	184.2	2,124
1978	197.3	173.7	173.2	159.7	175.2	187.4	202.6	205.6	185.6	175.6	176.3	191.7	2,206
1979	209.7	186.3	182.8	170.0	178.1	186.7	202.3	204.9	180.8	179.7	177.5	188.7	2,247
1980	200.0	188.7	187.5	168.7	175.7	189.4	216.8	215.4	191.5	178.6	178.6	195.6	2,286
1981	206.5	179.6	185.6	172.5	177.8	202.7	220.4	210.4	186.8	181.4	175.6	195.6	2,295
1982[1]	209.4	180.3	187.7	172.6	177.1	186.1	210.6	205.7	180.7	173.0	173.4	184.7	2,241
1983[3]	195.7	172.5	182.5	170.4	174.4	191.0	220.1	229.5	195.4	182.2			
1984													

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[1] Preliminary. [2] Data prior to 1973 are production by UTILITIES & INDUSTRIAL ESTABLISHMENTS. *Source: Federal Power Commission* T.225

Use of Fuels for Electric Generation in the United States

Year	Consumption of Fuel			Total Fuel in Coal Equivalent (Thousand Short Tons)	Net Generation by Fuels[3] (Million Kw. Hr.)	Lbs. of Coal Per Kw. Hr. (Pounds)	% of Total Net Fuel Generation	Average Cost of Fuel Per Kw. Hr. (¢)	Heat Rate BTU Per Kw. Hr.	Cost Per Million BTU Consumed (¢)
	Coal (Thousand Short Tons)	Fuel Oil (Thousand Barrels)[2]	Gas (Million Cubic Feet)							
1971	327,878	396,438	3,975,972	599,766	1,307,310	.918	95.9	.40	10,536	37.5
1972	352,391	493,663	3,976,762	647,968	1,421,136	.912	95.6	.43	10,479	41.1
1973	388,190	559,842	3,640,756	688,043	1,498,958	.918	96.1	.50	10,429	48.4
1974	392,344	536,140	3,429,072	685,115	1,449,079	.946	95.6	.93	10,481	89.0
1975	406,032	506,081	3,157,591	686,236	1,441,611	.952		1.12	10,383	108.3
1976	448,431	555,583	3,080,627	740,112	1,558,951	.950		1.20	10,369	115.3
1977	477,215	623,656	3,190,571	798,425	1,648,775	.969		1.38	10,449	131.8
1978	481,624	635,829	3,188,370	811,814	1,646,163	.986		1.53	10,495	145.3
1979	527,317	523,256	3,490,517	837,371	1,708,029	.981		1.62	10,470	155.4
1980	569,453	420,214	3,681,595	916,952	1,753,749	.980		2.07	10,489	197.0
1981	596,936	351,111	3,640,154	922,133	1,755,401	.992		2.42	10,506	230.2
1982[1]	593,666	249,771	3,225,518	858,869	1,643,687	.996		2.46	10,517	234.0
1983										

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[1] Preliminary. [2] 42-gallon barrels. [3] Excludes wood & waste fuels. *Source: Federal Power Commission* T.226

Fertilizers

The fertilizer industry produces nitrogenous, phosphatic, and potassic (potassium) fertilizers. Ammonia, the most widely used chemical carrier of nitrogen, is made from natural gas and nitrogen. Ammonia as a fertilizer is typically applied in a liquid form beneath the surface of the soil, or it can be converted into solid nitrogenous fertilizers such as urea or diammonium phosphate. Phosphoric acid, which is manufactured from phosphate rock and sulfuric acid, is the source of most of the phosphorous used in agriculture. Potassium chloride, known as potash, is the major source of potassium fertilizer.

Fertilizer chemicals based on nitrogen make up 53 percent of total world fertilizer consumption. Fertilizers based on phosphorous make up 26 percent of world consumption, and fertilizers utilizing potassium make up 21 percent.

The U.S., the Soviet Union, and Canada are the leading world producers of fertilizers. The U.S. is the leading phosphate producer. The Soviets lead in nitrogen production, and Canada and the Soviet Union produce approximately equivalent amounts of potash. Diammonium phosphate—the only major fertilizer chemical made up of two nutrients (20 percent nitrogen and 50 percent phosphorous)—is generally classified as a phosphatic fertilizer.

An estimated 75 percent of U.S. product shipments of nitrogenous and phosphatic fertilizers moves into the U.S. market. The depressed state of the fertilizer industry in 1982 continued in 1983, notwithstanding the beginning of economic recovery. Because of adverse weather and the Payment-In-Kind (PIK) program, which sharply reduced the amount of farmland in use, U.S. consumption of fertilizers in 1983 was about 12 percent below consumption in 1982. However, by the third quarter of 1983, grain prices had begun to rise steeply because of drought damage to U.S. corn and soybean crops. At the same time, critics of the Reagan Administration's PIK program were claiming that the cost of PIK outweighed its benefits. Thus, total 1984 product shipments of agricultural chemicals (including fertilizers and pesticides) are expected to rise 12 percent above 1983. It is estimated that approximately 6 to 8 percent of total U.S. production of nitrogenous and phosphatic fertilizers is for use on lawns and gardens. Trade sources have conjectured that the use of these two kinds of fertilizers by commercial lawn maintenance firms has doubled every year for the past five years.

The production of nitrogenous fertilizers can be defined as the product of ammonia (in terms of its nitrogen equivalent) because ammonia is used to make almost all nitrogen fertilizer chemicals. U.S. production of ammonia during 1983 was estimated at 10.5 million tons of nitrogen, 18 percent below 1982 production. Makers of ammonia operated at approximately 93 percent of total capacity during 1983. U.S. consumption of nitrogenous fertilizer in 1983 was below 1982 consumption by about 12 percent.

The value of product shipments of nitrogenous fertilizers during 1983, in constant dollars, was estimated at nearly $4 billion, or 12 percent less than in 1982. Reduced domestic demand (because of high grain prices partly due to the PIK program) and low-priced imports (an effect of the unusually strong dollar) kept nitrogenous fertilizer prices low in 1982–83. The high cost of natural gas also contributed to depressed prices and reduced U.S. ammonia capacity.

U.S. exports of nitrogenous fertilizers, adjusted for inflation, were estimated at $511 million in 1983, 20 percent below the 1982 level. Although total exports of nitrogenous fertilizers were off in 1983, exports of diammonium phosphate (DAP) were up over 20 percent, thus accounting for almost 50 percent of the total nitrogen exported.

U.S. imports of all types of nitrogenous fertilizer, totaling $662 million in constant dollars, were up 27 percent in 1983. Imports of ammonia alone accounted for over half of all imports. Urea accounted for 40 percent of the imports of nitrogenous fertilizer, an increase of over 130 percent above 1982. U.S. imports from the Soviet Union accounted for 22 percent of nitrogenous fertilizer imports in 1983 compared with 29 percent in 1982.

Because phosphate rock is used to make all phosphatic fertilizer chemicals, the production of phosphatic fertilizer can be defined as the production of phosphatic rock (in terms of phosphorous pentoxide equivalent). The production of rock in 1983 was estimated at 13.5 million tons of phosphorous pentoxide, 6 percent above the 1982 low. Some reductions in inventories were noted in the beginning of 1983, but exports rose at a rate that caused year-end inventories to slip back to beginning-1983 levels despite an expected 13 percent decline in consumption. The value of phosphatic fertilizer shipments in 1983 was estimated at $2.7 billion, 14 percent below the 1982 level in constant dollars. Adjusted exports of phosphatic fertilizers during 1983 were over $1 billion (in constant dollars), or 4 percent above the 1982 level. Diammonium phosphate exports were up 20 percent from 1982, thus accounting for over 25 percent of all phosphatic fertilizer exports.

Fertilizers are expected to account for 60 percent of U.S. product shipments of agricultural chemicals in 1984—the balance being in pesticides. Because of the increasing competition faced by U.S. fertilizer products in world markets, it is possible that pressure for some kind of Federal assistance to U.S. fertilizer exports and sales will increase during 1984. Prospects for rising grain prices in 1984 and for a continuation of dollar strength may mean a more adverse balance of U.S. trade and reduced sales of fertilizers.

The value of product shipment of nitrogenous fertilizers during 1984 (in constant dollars) is expected to be 10 percent above 1983, but 11 percent below the 1981 high. World prices for nitrogenous fertilizer should rise somewhat and improve profit margins for some U.S. companies. Overall, however, U.S. exports of nitrogenous fertilizers are expected to drop by 10 percent, mostly because of the effects of the strong dollar. This decline would nonetheless compare favorably with the 20 percent decrease in U.S. exports between 1982 and 1983. Over the long term, growing world production and the resulting increase in the demand for food, should improve the world demand for nitrogenous fertilizer. Trade sources estimate that presently there are not enough ammonia plants under construction in the world to meet anticipated demand. This imbalance should cause world prices for nitrogenous fertilizers to begin to rise slightly in 1984. By 1985 or 1986, ammonia prices may justify reactivation of all idle ammonia plants that are basically technically sound and have access to natural gas at competitive prices.

Figured in constant dollars, product shipments of phosphatic fertilizers should be 15 percent above the 1983 level, but 24 percent under the 1980 high. The value of 1984 shipments of phosphatics is expected to total $3.2 billion. Exports of phosphatic fertilizers in 1984 are expected to increase 10 to 15 percent over 1983 despite the strength of the dollar. This is because of the world preference for derivatives of U.S. phosphate rock and phosphoric acid over the rock and acid themselves. This preference became evident in the first half of 1983. The U.S. will probably continue to be the world's leading producer of phosphate chemicals during the rest of the decade. However, production in countries with very large natural deposits of phosphates (Morocco, for example) may soon achieve a faster rate of production than the U.S. This may result in a decrease in the growth rate of U.S. exports of phosphates. Although U.S. exports of phosphatic fertilizers are expected to increase significantly in 1984, it will probably be some time before dollar-value shipments attain 1979–80 levels.

Small amounts of fertilizer chemicals are made by integrated producers by mixing all three primary nutrients (nitrogen, phosphate, and potash). These mixed fertilizers are usually marketed directly to the farmer through retail channels. However, substantial amounts of fertilizer chemicals are purchased by establishments who do the mixing and then sell to wholesalers and retailers. Nevertheless, because large amounts of some fertilizer chemicals, such as anhydrous ammonia and urea, are applied individually rather than in mixtures, the value of product shipments of mixed fertilizers does not exactly equal the value of combined shipments of the primary nutrients. Trade in fertilizer mixtures is currently quite small. Exports range from 2 to 4 percent of product shipments, and imports are 2 to 4 percent of supply.

World Production of Ammonia In Thousands of Short Tons of Contained Nitrogen

Year	Bulgaria	Canada	China	France	E. Germany	W. Germany	India	Italy	Japan	Mexico	Netherlands	Romania	Un. Kingdom	United States	USSR	Total
1977	.9	1.9	6.2	2.2	1.2	2.2	2.2	1.3	2.5	.9	2.4	2.0	1.8	14.7	11.8	68.3
1978	.9	2.1	8.4	2.2	1.3	2.2	2.4	1.7	2.6	1.4	2.4	2.5	1.8	14.2	12.5	74.1
1979	.9	2.2	9.7	2.4	1.2	2.4	2.5	1.6	2.6	1.5	2.1	2.6	1.8	15.4	13.4	78.5
1980	.9	2.2	11.0	2.3	1.3	2.3	2.4	1.5	2.3	1.7	2.1	2.5	1.8	16.2	13.9	81.5
1981[1]	.9	2.4	10.9	2.2	1.3	2.2	3.5	1.3	2.0	1.9	2.0	2.4	2.0	15.6	14.2	81.6
1982[1]	.9	2.8	11.3	2.2	1.3	2.2	4.0	1.3	1.8	2.2	2.1	2.4	2.0	12.7	14.4	80.1
1983[2]		2.8		2.2		2.2	4.2	1.3	1.8	2.2	2.1		2.0	11.5		79.2
1984																

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.227

U.S. Salient Statistics of Nitrogen[1] (Ammonia) In Thousands of Short Tons

					Apparent Consumption			Producer Stocks		Average Price ($ Per Sh. Ton)			
										Urea			
Year	Net Import Reliance as a % of Appar. Con.	Production (Fixed)	Imports Fixed	Exports (Ammonia)	Fixed (Ammonia)	Elemental	Fixed	Natural	Fixed	F.O.B. Gulf Coast	Deliv. Corn Belt	Ammonium Nitrate: Deliv. Corn Belt	Ammonia F.O.B. Gulf Coast
1977	1	14,712	884	346		11,870	14,831		2,269				90
1978	7	14,169	1,247	434		13,707	15,270		2,044	106–110	125–135	86–90	80–84
1979	7	15,420	1,603	649		14,386	16,574		1,752	145–150	165–170	118–120	128–132
1980	8	16,244	1,921	681			17,664		1,483	170–175	155–170	110–115	120–125
1981	5	15,619	1,719	506			16,355		1,960	130–135	170–180	138–150	132
1982[1]	8	12,742	1,737	610			13,858		1,970	122–125	135–145	125–145	120
1983[2]	11	11,500	1,800	450			12,920		1,900				155
1984													

[1] Elemental, Fixed, & Natural Nitrates. [2] Estimates. *Source: Bureau of Mines* T.228

World Production of Phosphate Rock In Thousands of Metric[3] Tons

Year	Brazil	China	Christmas Isl.	Israel	Jordan	Morocco	Nauru Island	Senegal	South Africa	Togo	Tunisia	United States	USSR	Vietnam	World Total
1977	676	4,000	1,186	1,227	1,782	17,572	1,146	1,871	2,403	2,857	3,615	47,256	26,925	1,500	119,310
1978	1,096	4,695	1,400	1,725	2,303	19,713	1,999	1,759	2,699	2,827	3,712	50,037	23,900	1,800	125,022
1979	1,628	8,517	1,367	2,086	2,825	20,032	1,828	1,835	3,221	2,920	4,154	51,611	24,400	400	132,010
1980	2,612	10,726	1,713	2,307	3,911	18,824	2,087	1,632	3,185	2,933	4,582	54,415	25,300	500	139,604
1981[1]	2,764	11,500	1,423	1,919	4,244	18,562	1,480	1,699	2,618	2,215	4,596	53,624	25,600	500	137,524
1982[1]	2,732	12,500	1,328	2,300	4,431	17,754	1,359	975	3,173	2,128	4,196	37,414	26,100	500	122,633
1983[2]		13,000		2,200	4,400	18,000		1,000	3,200	2,100	4,200	42,000	26,000		128,000
1984															

[1] Preliminary. [2] Estimate. [3] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines* T.229

U.S. Salient Statistics of Potash In Thousands of Metric[4] Tons (K_2O Equivalent)

Year	Net Import as % of Consum.	Production	Sales by Producers	Imports for Consumption	Exports	Apparent Consumption	Producer Stocks Dec. 31	Avg. Value $ per ton		Average Price[3] $ Per Met. Ton
								Avg. Value Per Ton of Product—$	of K_2O Equiv.	
1971		2,587	2,592	2,766	564	4,794	428			34
1972		2,659	2,618	2,961	764	4,815	468			34
1973		2,603	2,865	2,587	889	5,563	206			36
1974		2,552	2,545	4,326	787	6,084	212			52
1975[4]	51	2,269	1,900	3,445	707	4,638	562	54.22		84
1976	61	2,177	2,268	4,168	857	5,578	471	50.37	92.93	73
1977	63	2,229	2,232	4,605	845	5,992	467	48.78	92.68	71
1978	64	2,253	2,307	4,707	809	6,205	414	51.97	98.16	76
1979	66	2,225	2,388	5,165	635	6,918	251	61.38	116.92	95
1980	65	2,239	2,217	4,972	840	6,349	273	82.98	159.63	130
1981	65	2,156	1,908	4,796	491	6,213	520	89.62	172.40	137
1982[1]	65	1,784	1,784	3,858	519	5,123	520	78.42	148.87	109
1983[2]	75	1,300		4,200	350	5,170	500			110

[1] Preliminary. [2] Estimate. [3] Unit of K_2O, standard 60% muriate f.o.b. mine. [4] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines* T.232

World Production of Marketable Potash In Thousands of Metric[3] Tons (K_2O Equivalent)

Year	Canada (sales)	Chile	China	Congo (Brazz.)	France	Germany		Israel	Italy	Spain	USSR	United States	United Kingdom	World Total
						East	West							
1972	3,852	28		310	1,941	2,709	2,698	618	238	703	5,989	2,659		22,060
1973	4,698	28		297	2,494	2,818	2,809	585	148	522	6,523	2,603		23,855
1974	6,041	14		318	2,508	3,157	2,888	669	169	436	7,260	2,552		26,432
1975	5,992	13	330	315	2,116	3,328	2,450	789	155	506	8,757	2,501	17	27,269
1976[3]	4,996	15	150	254	1,603	3,161	2,036	680	330	630	8,310	2,177	41	24,386
1977	5,764	11	18	136	1,580	3,229	2,341	730	224	562	8,347	2,229	81	25,252
1978	6,340	17	21	—	1,795	3,323	2,470	744	196	613	8,193	2,253	157	26,122
1979	7,074	22	16	—	1,921	3,395	2,616	737	182	668	6,635	2,225	177	25,668
1980	7,532	23	12	—	1,894	3,432	2,737	797	156	658	8,064	2,239	321	27,855
1981[1]	6,549	22	11	—	1,831	3,490	2,591	839	118	705	8,449	2,156	285	27,046
1982[2]	5,196	22	25		1,823	3,500	2,600	1,000	120	750	9,000	1,784	400	25,950
1983[2]	5,500		25		1,750	3,500	2,500	1,300	160	690	9,000	1,300	280	26,000

[1] Preliminary. [2] Estimate. [3] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: U.S. Bureau of Mines* T.231

U.S. Salient Statistics of Phosphate Rock In Thousands of Metric Tons

Year	Mine Production	Marketable Production	Imports for Consumption	Exports	Apparent Consumption	Stocks, Dec. 31 (Producer)	Price—$ Avg. Per Metric Ton (f.o.b. Plant)
1972		40,831	55	14,275	29,535	10,501	5.09
1973	126,720	38,218	59	12,585	28,328	8,482	6.24
1974	141,353	41,437	165	12,605	31,491	6,975	12.10
1975	170,077	44,276	33	11,131	31,022	9,021	25.35
1976	154,278	44,662	42	9,433	31,131	13,770	21.26
1977	166,893	47,256	158	13,230	34,365	13,682	17.39
1978	173,429	50,037	908	12,870	36,812	15,748	18.56
1979	185,757	51,611	886	14,358	39,591	14,500	20.26
1980	209,883	54,415	486	14,276	40,791	13,709	23.10
1981	183,733	53,624	13	10,395	35,144	20,200	26.82
1982[1]	104,135	37,414	31	9,842	28,760	18,287	25.40
1983[2]		42,000	30	13,000	26,000	15,000	20.00

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.230

Flaxseed And Linseed Oil

The USDA in March 1984 estimated 1983/84 world production of flaxseed at 2.16 million metric tons, off nearly 16 percent from estimated 1982/83 production. Significant reductions occurred in such major producing countries as Canada, and Argentina. U.S. production also dropped sharply.

The 1983/84 world flaxseed crush was estimated at 1.97 million tonnes, up from 1.82 million in 1982/83. World exports of flaxseed were estimated by the USDA at 537 thousand metric tons, up 9 percent from 1982/83 exports of 492 thousand tonnes. World ending stocks were projected at 542 thousand tonnes versus 770 thousand.

World production of linseed meal in the 1983/84 season was estimated by the USDA at 1.03 million tonnes versus 1.23 million in 1982/83, calculated from assumed extraction rates, which represent potential rather than actual production. On the same basis, world production of linseed oil was estimated at 734 thousand tonnes for the 1983/84 season compared with 870 thousand tonnes in 1982/83.

The bulk of the flaxseed (linseed) harvest in the USSR, the world's largest producer, occurs in the July-October period. The harvest in Argentina takes place mainly in the December-January period, and the Canadian harvest August to October. Acreage intentions for the 1984 flaxseed crop in Canada were 42 percent above 1983 plantings.

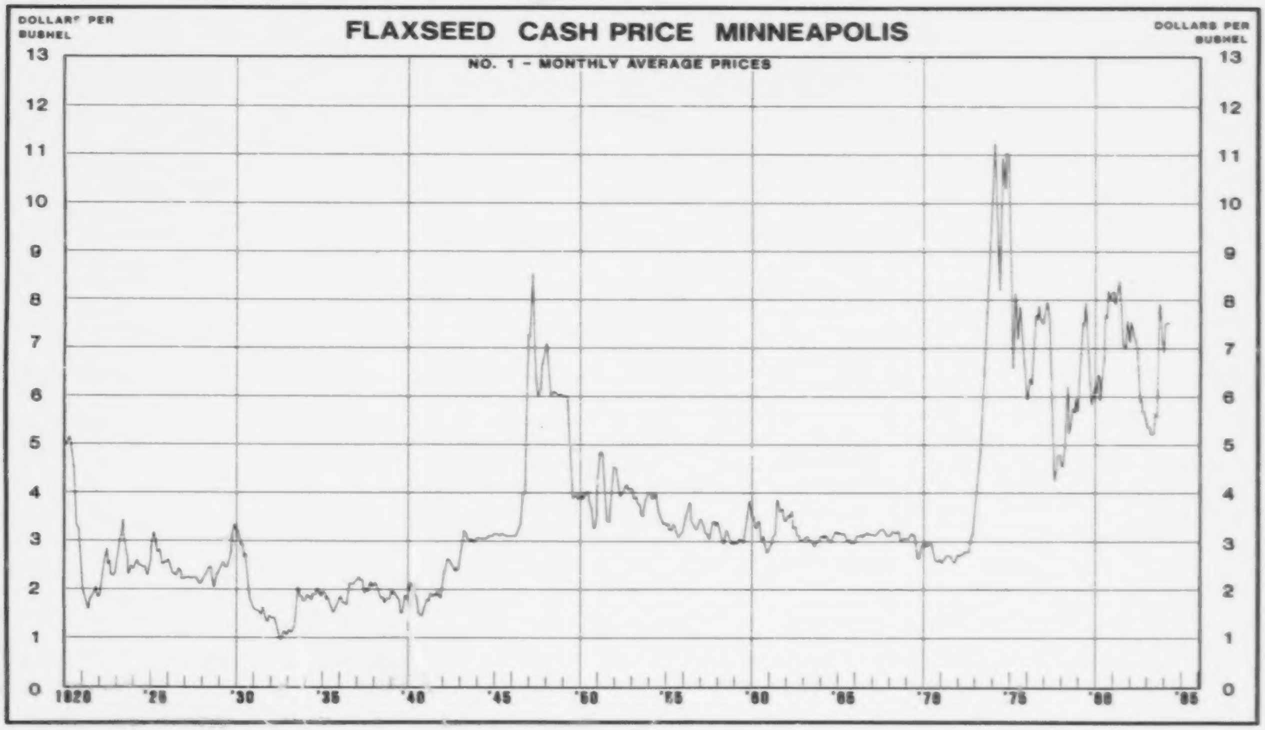
Futures Market

Flaxseed futures are traded on the Winnipeg Commodity Exchange.

World Production of Flaxseed In Thousands of Metric Tons

Crop Year	Argentina	Australia	Czechoslovakia	Canada	Ethiopia	France	India	Mexico	Poland	Romania	Turkey	Uruguay	United States	USSR	World Total
1974–5	381	33		351	72	6	564	20	40	39	7	39	358	388	2,416
1975–6	377	13		445	75	32	598	27	36	45	8	62	395	340	2,564
1976–7	750	12		277	50	16	431	8	49	50	7	46	199	337	2,347
1977–8	855	35		650	50	44	527	18	38	50	6	40	409	300	2,941
1978–9	810	28		653	50	43	527	18	38	50	6	40	277	300	2,468
1979–0	600	14		572		31	535	15	52		3	31	305	250	2,687
1980–1	610	7	15	442		35	423	8	29	44	3	21	201	196	2,101
1981–2[1]	600	7	12	468		18	474	12	24	38	2	14	198	165	2,099
1982–3[2]	730	6	12	734		28	476	6	15	45	2	10	296	150	2,560
1983–4[2]	650			475			450						187	210	2,168

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.233



Production of Flaxseed in the United States In Thousands of Bushels

Year	Crop Production Estimates Aug. 1	Sept. 1	Oct. 1	Dec. 1	By States Minnesota	Montana	North Dakota	South Dakota	Texas	U.S. Total
1974	13,713	14,263	14,543	13,337	3,163	40	6,688	3,818	374	14,083
1975	16,272	16,140	15,746	14,557	2,875	38	7,700	4,460	480	15,553
1976	6,776	6,967	6,951	7,356	1,950	50	4,000	1,380	440	7,580
1977	15,466	16,011	16,249	16,105	3,190	35	7,500	4,290	90	14,280
1978	11,156	11,348	11,705	10,921	2,201	—	4,025	2,188	200	8,614
1979	11,847	12,501	13,255	13,539	2,219	—	5,980	3,770	45	12,014
1980	7,060	7,700	7,940	8,128	1,563	—	2,900	3,445	20	7,928
1981	8,083	8,083	7,893	7,799	1,300	—	4,250	2,249	—	7,799
1982	10,940	11,485	11,730	11,635	1,650	—	6,650	3,335	—	11,635
1983[1]	8,295	7,535	7,413	7,363	938	—	5,060	1,365	—	7,535

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.234

U.S. Supply and Distribution of Flaxseed In Thousands of Bushels

Year Beginning June	Supply: Stocks, June 1: Farm	Terminal	All Other	Total Stocks[4]	Imports	Production	Total Supply	Distribution: Seed	Crushing	Exports	Other[2]	Total Distribution
1973-4	403	— 3,103—		5,485	399	16,408	22,292	1,360	17,203	630	−953	18,240
1974-5	658	— 1,885—		4,052	130	14,083	18,265	1,231	13,386	372	245	15,234
1975-6	1,120	— 1,100—		3,031	148	15,553	18,732	1,054	11,791	953	44	13,842
1976-7	1,830	— 3,060—		4,890	2,168	7,580	14,638	1,043	10,677	196	−239	11,667
1977-8	1,070	— 1,934—		2,961	859	14,280	18,100	557	11,615	1,001	−388	12,785
1978-9	2,890	— 2,606—		5,315	1,557	8,614	15,486	724	13,009	91	−924	12,900
1979-0	977	— 1,609—		2,586	1,916	12,014	16,516	650	12,425	174	−1,751	11,498
1980-1	2,681	— 2,337—		5,018	2,510	7,928	15,456	547	11,927	76	131	12,681
1981-2[1]	1,178	— 1,597—		2,775	3,502	7,799	14,076	691	11,231	11	115	12,048
1982-3[3]	1,253	— 775—		2,028	1,700	11,635	15,363	800	10,500	950	113	12,363
1983-4[3]	2,211	— 1,257—		3,468	1,000	7,363	11,831					

[1] Preliminary. [2] Other disappearance represents cleaning loss, waste, and residual. [3] Forecasts. [4] Estimates prior to 1975. Derived from July 1 stocks by adding June crushings & exports. *Source: Statistical Reporting Service, U.S.D.A.* T.235

Average Price Received by Farmers for Flaxseed in the U.S. In Cents Per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]
1974-5	860	1080	977	1050	1060	1050	863	776	647	678	711	664	966
1975-6	755	722	682	666	560	570	537	587	574	588	554	669	657
1976-7	720	704	748	708	726	700	704	720	742	752	722	637	708
1977-8	514	415	420	456	420	432	421	407	441	485	532	589	454
1978-9	524	534	531	525	539	530	567	601	648	706	737	727	574
1979-0	690	642	634	556	544	561	551	579	585	551	604	588	597
1980-1	655	702	717	710	723	759	754	748	725	735	765	747	727
1981-2	723	708	644	621	664	684	690	691	680	669	660	665	675
1982-3	625	535	537	511	495	468	486	470	460	460	466	492	501
1983-4	496	595	716	700	692	646	686	701	710	706			

[1] Season average includes an allowance for unredeemed loans. *Source: Crop Reporting Board, U.S.D.A.* T.236

Flaxseed Stocks in the United States In Thousands of Bushels

Year	On Farms Jan. 1	Apr. 1	June 1	Oct. 1	Off Farms Jan. 1	Apr. 1	June 1	Oct. 1	Total Stocks Jan. 1	Apr. 1	June 1	Oct. 1
1975	3,946	2,668	N.A.	7,552	3,745	1,907	N.A.	6,228	7,691	4,575	3,031	13,780
1976	4,220	3,009	1,830	4,116	5,533	4,164	3,060	4,971	9,753	7,173	4,890	9,087
1977	2,853	2,070	1,070	9,292	4,375	2,879	1,934	4,307	7,228	4,949	3,004	13,599
1978	5,773	4,499	2,890	6,170	5,168	3,905	2,606	3,390	10,941	8,404	5,496	9,560
1979	3,446	2,349	977	7,449	4,027	3,039	1,609	2,999	7,473	5,388	2,586	10,448
1980	4,909	3,967	2,681	5,583	4,723	3,249	2,337	3,200	9,632	7,216	5,018	8,583
1981	3,132	2,086	1,178	4,575	3,423	2,252	1,597	1,902	6,555	4,338	2,775	6,477
1982	3,232	2,035	1,253	5,650	1,864	1,521	775	1,770	5,096	3,556	2,028	7,420
1983[1]	4,306	2,891	2,211		2,151	1,798	1,257		6,457	4,689	3,468	
1984												

[1] Preliminary. *Source: Crop Reporting Board, U.S.A.* T.237

FLAXSEED AND LINSEED OIL

Average Price of No. 1 Flaxseed at Minneapolis In Dollars Per Bushel

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[1]
1970–1	2.65	2.64	2.60	2.62	2.63	2.58	2.62	2.63	2.71	2.72	2.70	2.68	2.66
1971–2	2.62	2.61	2.58	2.64	2.71	2.70	2.74	2.74	2.78	2.80	2.80	2.79	2.69
1972–3	2.85	3.00	3.08	3.14	3.41	3.90	4.52	4.75	4.84	5.12	5.93	6.37	3.94
1973–4	7.36	7.89	8.71	8.82	9.22	10.06	10.07	11.29	9.87	8.67	8.26	9.25	8.93
1974–5	10.92	10.33	11.04	11.08	10.97	8.76	7.70	6.60	7.39	8.15	7.23	7.88	9.12
1975–6	7.69	7.25	6.64	6.18	6.09	5.93	6.36	6.30	6.40	6.67	7.31	7.70	6.71
1976–7	7.63	7.91	7.61	7.71	7.46	7.54	7.63	7.82	7.99	7.76	6.10	5.17	7.36
1977–8	4.26	4.41	4.79	—	4.80	4.61	4.51	4.78	5.30	5.78	6.25	5.22	4.97
1978–9	5.47	5.76	5.70	5.99	5.75	6.17	6.63	7.22	7.54	7.51	7.98	7.23	6.58
1979–0	7.00	6.71	6.12	5.84	6.16	6.14	6.47	6.44	5.95	6.24	6.50	7.15	6.39
1980–1	7.70	7.65	7.82	8.23	8.04	8.17	8.19	7.93	8.11	8.42	8.06	7.85	8.01
1981–2	7.62	7.02	7.00	7.41	7.61	7.15	7.57	7.47	7.35	7.28	7.02	6.90	7.28
1982–3	5.90	5.93	5.70	5.71	5.52	5.36	5.37	5.23	5.22	5.25	5.66	5.58	5.54
1983–4	6.15	7.93	7.65	7.09	6.92	7.50	7.52	7.54					

[1] Weighted average by carlot sales. *Source: Economic Research Service, U.S.D.A.* T.238

Wholesale Price of Raw Linseed Oil at Minneapolis in Tank Cars In Cents Per Pound

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1970–1	11.0	11.0	10.0	10.0	10.0	9.5	9.5	9.5	9.0	8.8	8.8	8.8	9.7
1971–2	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	9.5	8.9
1972–3	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	14.0	14.2	10.3
1973–4	15.0	N.A.	N.A.	N.A.	—	35.0	35.0	40.2	42.6	45.0	45.0	44.5	37.8
1974–5	44.0	44.0	47.0	48.5	48.5	48.5	46.2	44.0	44.0	44.0	44.0	44.0	45.6
1975–6	44.0	39.0	36.0	35.0	30.5	29.8	28.3	27.5	25.5	24.0	24.0	24.0	30.6
1976–7	25.4	27.0	27.8	30.0	30.0	30.0	30.0	30.0	28.0	28.5	28.5	28.5	28.6
1977–8	28.0	28.0	27.0	22.8	20.0	20.0	26.6	26.6	26.6	—	22.0	22.0	24.5
1978–9	22.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	30.0	30.0	24.9
1979–0	30.0	30.0	32.0	32.0	32.0	32.0	32.0	28.8	28.8	27.8	26.6	27.0	29.9
1980–1	27.0	28.6	29.0	29.2	29.0	29.8	32.8	32.0	31.3	32.0	32.6	32.8	30.5
1981–2	32.8	32.3	31.8	30.8	30.0	27.6	29.5	28.5	28.2	28.0	28.0	27.0	29.5
1982–3	27.8	26.3	26.0	24.6	25.0	25.2	24.6	25.0	24.3	23.6	23.0	23.0	24.9
1983–4	22.8	25.5	31.6	34.0	31.5	32.0							

Source: Department of Agriculture T.240

U.S. Stocks of Linseed Oil (Crude & Refined) at Factories & Warehouses In Millions of Pounds

Year	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1
1970–1	128.7	112.8	117.1	130.0	134.9	144.9	148.5	157.5	170.5	180.7	192.8	187.2
1971–2	203.8	193.2	177.1	179.9	203.7	210.8	224.9	236.7	245.3	263.5	280.9	275.3
1972–3	276.6	263.8	253.3	259.2	258.4	246.3	253.6	225.3	224.1	177.3	153.0	127.1
1973–4	113.0	86.4	71.6	90.3	85.8	86.3	82.2	70.1	64.7	65.3	66.4	70.8
1974–5	59.2	69.4	60.2	48.2	58.9	47.6	71.5	69.2	67.0	56.0	49.8	48.6
1975–6	43.8	36.7	30.1	37.8	49.5	47.6	55.8	44.1	44.0	46.3	51.7	48.9
1976–7	47.6	42.7	48.0	53.5	58.1	59.7	70.2	89.9	87.8	82.3	88.4	88.1
1977–8	87.3	74.0	69.0	79.2	72.6	74.2	89.2	93.2	92.0	74.8	76.3	69.6
1978–9	62.6	75.6	49.9	44.8	34.4	34.8	34.9	34.8	35.5	37.4	43.6	43.9
1979–0	49.1	39.9	47.7	62.9	46.4	43.6	35.6	41.8	36.3	48.2	65.6	53.5
1980–1	42.9	45.3	35.5	52.5	43.8	34.5	45.6	50.6	53.3	34.7	42.1	56.3
1981–2	67.1	57.4	65.7	71.4	72.1	64.3	56.3	62.7	57.0	64.6	66.7	50.4
1982–3[1]	37.4	33.9	30.5	44.6	43.0	26.8	39.0	34.1	41.8	41.6	27.1	35.1
1983–4[1]	54.7	46.5	41.7	50.4	46.0	35.0	34.1	38.0	40.5			

[1] Preliminary. *Source: Bureau of the Census* T.245

Month End Open Interest of Flaxseed Futures in Winnipeg In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	3,250	3,820	4,293	5,229	5,964	5,576	4,671	5,460	5,019	5,999	5,551	5,596
1979	5,998	6,537	6,656	5,827	5,256	4,411	7,185	6,219	5,845	6,517	5,831	7,860
1980	8,319	9,117	8,790	9,210	8,059	7,460	9,606	10,414	8,728	9,656	10,455	11,786
1981	10,923	19,483	9,237	8,210	6,381	8,039	8,988	9,101	4,807	5,216	5,580	5,064
1982	6,339	7,201	7,714	7,214	4,897	4,976	4,390	6,041	6,306	5,783	6,493	4,097
1983	4,759	5,261	4,128	5,039	4,552	3,697	3,321	2,520	3,953	3,345	6,282	6,091
1984	6,509	6,964	5,100	5,944								

Source: Winnipeg Commodity Exchange T.244

Supply and Distribution of Linseed Oil in the United States In Millions of Pounds

Year Beginning June	Supply			Exports & Shipments	Domestic Disappearance								Per Capita — Lbs. —	World Linseed Oil Production in metric tons[3]
					Drying Oil Products					Lubricants & Similar Oils	Fatty Acids	Total		
	Stocks June 1	Production	Total		Paint & Varnish	Linoleum & Oilcloth	Resins & Plastics	Other Inedible	Total					
1973-4	127	344	471	142	205	11	21	22	248	10	—	259	1.22	
1974-5	71	263	334	143	112	3	11	12	134	8	—	142	.66	
1975-6	49	231	279	42	154	—	10	9	173	10	4	187	.87	
1976-7	49	217	266	14	126		13	8	156	9	8	164	.75	
1977-8	88	232	320	25	177		23	15		7	3	225	1.03	
1978-9	70	259	329	54										
1979-0[1]	44	256	300	38										914
1980-1[2]	54	251	305	51										714
1981-2[2]	56	237	293	54										714
1982-3[2]	35													870
1983-4[2]														737

[1] Preliminary. [2] Estimate. [3] Oil production calculated from assumed extraction rates. *Source: Economic Research Service, U.S.D.A.* T.239

U.S. Linseed Oil Consumption in Refining In Millions of Pounds

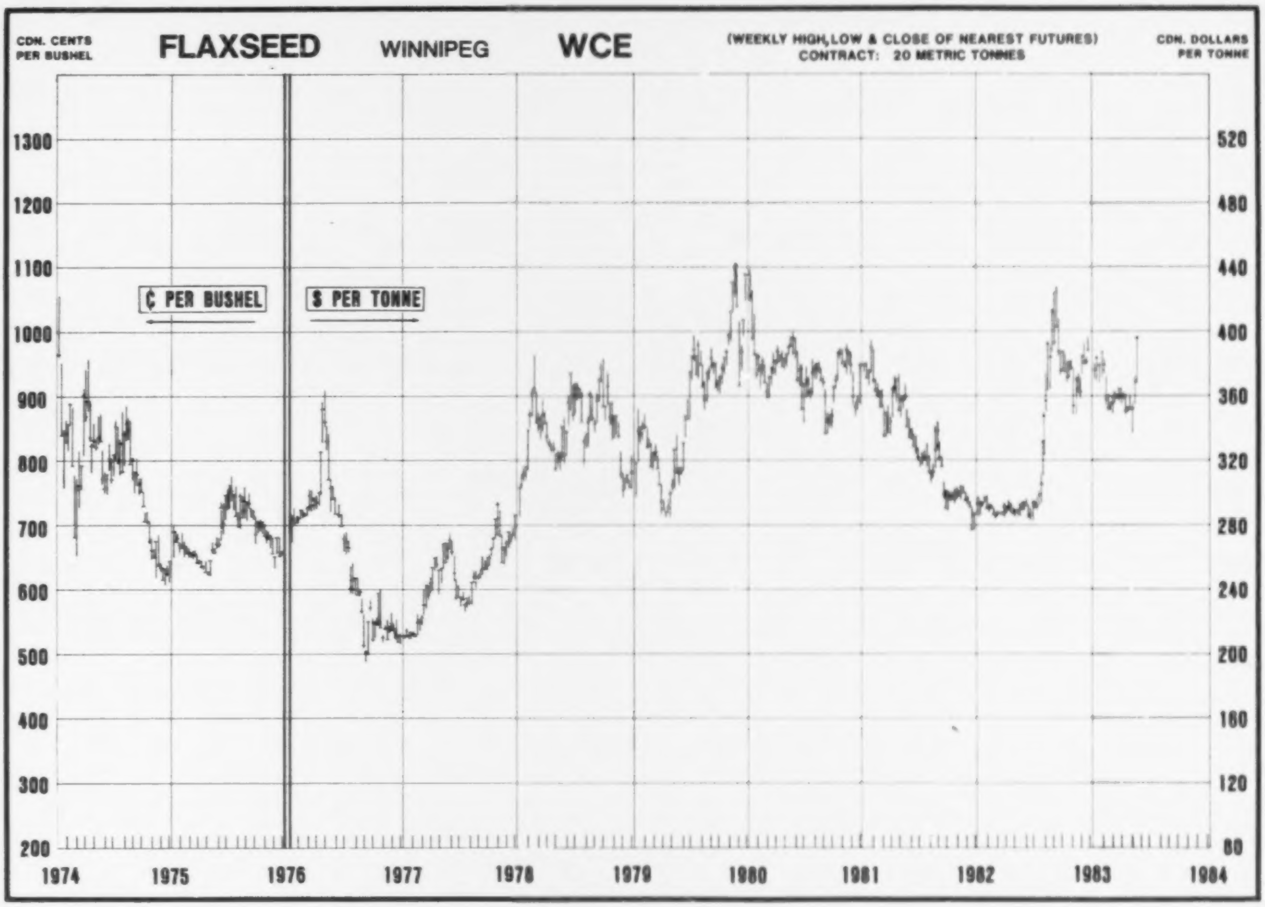
Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1973-4	25.4	30.1	9.9	31.8	19.4	12.0	31.2	14.3	15.8	15.7	18.6	30.3	254.5
1974-5	.5	9.5	37.3	10.2	16.8	2.5	9.1	11.4	13.0	9.5	5.9	16.6	128.6
1975-6	12.6	22.6	20.4	22.8	8.5	12.8	22.4	15.4	15.2	9.6	23.1	15.3	187.2
1976-7	22.2	11.1	15.3	15.8	8.6	12.0	14.7	15.9	20.1	6.8	20.9	21.9	163.5
1977-8	23.9	22.9	13.7	10.9	8.9	3.8	15.4	15.8	23.9	21.2	42.5	21.5	224.7
1978-9	6.1	31.5	14.0	22.3	16.1	11.4	16.2	15.0	14.7	21.7	20.5	18.3	267.9
1979-0	18.4	19.9	15.8	24.3	14.9	11.4	11.7	12.3	14.6	17.1	11.6	12.2	184.2
1980-1	13.2	15.7	16.7	21.1	11.4	11.6	13.6	13.9	12.2	19.8	15.4	12.9	177.5
1981-2	21.0	16.0	15.3	15.2	N.A.	N.A.	6.5	9.6	11.5	17.5	9.9	9.0	131.5
1982-3[1]	8.7	8.3	8.4	7.6	6.1	5.0	6.0	6.3	7.1	7.0	7.6	8.9	87.0
1983-4[1]	11.7	11.9	12.4	16.5	10.6	10.0	13.5	12.6					

[1] Preliminary. *Source: Bureau of the Census* T.242

Factory Shipments of Paints, Varnish and Lacquer in the U.S. In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	220.2	229.2	257.2	268.9	294.4	297.5	279.4	301.7	272.5	274.3	240.0	197.8	3,133
1974	243.8	246.3	279.5	315.9	342.3	349.5	345.5	363.8	338.8	343.2	280.4	223.3	3,672
1975	265.0	267.5	302.2	334.1	362.9	391.6	373.4	387.1	384.6	364.0	318.2	276.0	4,027
1976	305.0	353.1	396.2	419.1	434.0	477.3	423.6	455.4	420.7	355.3	357.1	322.8	4,720
1977	329.8	354.2	466.2	449.5	508.5	527.0	465.0	521.1	482.2	435.5	409.2	359.7	5,308
1978[2]	377.1	403.7	500.6	517.1	589.0	586.2	518.4	589.0	536.0	516.6	470.2	403.3	6,008
1979	476.1	484.0	622.0	567.6	677.8	668.3	638.4	678.4	588.6	648.5	526.8	448.1	7,025
1980	540.8	567.9	611.9	648.0	702.4	721.6	682.9	689.3	698.2	706.1	546.4	520.3	7,636
1981	555.1	593.2	728.1	774.5	770.8	851.8	774.4	784.8	773.2	704.2	572.0	513.6	8,396
1982[1]	544.9	579.9	711.7	741.0	791.2	835.1	744.9	672.0	660.2	440.3	485.0	424.4	7,113
1983	538.8	569.9	722.8	744.8	802.4	893.5	763.4	831.2	789.9				

[1] Preliminary. [2] New series; not comparable with earlier data. *Source: Bureau of the Census* T.246



High, Low & Closing Prices of May Flaxseed Futures in Winnipeg In Dollars per Tonne

Year of Delivery		Year Prior to Delivery							Delivery Year					Life of Delivery Range
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	263.60	247.50	242.90	247.00	230.50	229.00	217.00	221.00	246.50	261.00	271.30	271.30
	Low	—	246.00	200.50	216.40	214.90	215.00	210.50	208.70	211.00	217.40	236.00	243.00	200.50
	Close	—	251.10	218.00	227.00	221.70	218.40	210.50	210.60	216.60	242.50	250.80	271.30	—
1979	High	246.10	243.50	255.50	262.50	285.00	284.00	288.00	325.50	385.00	357.00	344.40	346.00	385.00
	Low	243.10	233.00	234.80	249.60	256.00	260.50	271.50	284.00	326.50	332.60	321.00	313.00	233.00
	Close	243.10	243.50	251.10	256.50	279.00	273.00	284.60	325.00	351.50	343.00	322.00	336.00	—
1980	High	356.50	345.50	354.00	355.00	356.40	341.50	332.00	351.50	347.50	330.30	295.50	336.00	356.50
	Low	302.00	312.50	316.50	325.00	315.50	319.30	317.00	297.00	315.00	295.50	284.00	292.00	284.00
	Close	333.00	319.50	331.70	348.00	319.00	330.70	318.00	337.60	316.00	296.20	293.00	307.60	—
1981	High	370.50	412.70	406.00	412.70	417.50	468.90	470.50	439.10	385.80	387.30	391.40	397.00	470.50
	Low	327.50	365.00	367.00	391.50	387.00	413.00	395.70	371.00	364.00	358.00	376.30	376.70	327.50
	Close	360.60	405.50	393.00	395.80	411.90	468.00	431.10	373.00	368.20	378.40	382.70	389.50	—
1982	High	413.00	410.00	406.20	403.20	426.20	424.50	412.90	393.50	388.50	364.00	372.50	367.00	426.00
	Low	385.00	391.00	392.50	376.70	392.00	404.60	367.50	367.30	352.70	332.50	340.50	340.50	332.50
	Close	393.00	396.00	399.60	397.00	422.50	414.50	378.50	390.10	361.50	343.70	350.00	340.50	—
1983	High	385.00	374.00	369.50	369.20	332.70	325.00	318.00	304.50	304.00	299.50	294.50	294.50	385.00
	Low	373.50	355.00	347.10	326.60	318.10	316.00	288.30	290.90	289.20	288.00	286.80	285.30	285.30
	Close	373.50	355.10	364.50	326.60	318.30	317.70	293.50	304.00	289.30	291.00	287.00	288.80	—
1984	High	—	—	409.0	454.0	416.0	402.9	408.0	390.1	386.2	366.0	362.3		
	Low	—	—	339.0	407.0	391.5	369.0	377.5	370.0	350.0	352.0	347.0		
	Close	—	—	398	415.5	391.5	381.0	392.6	382.5	353.0	359.0	347.5		

Source: Winnipeg Commodity Exchange

T 243

Gas

U.S. natural gas production in 1983 amounted to 16.28 Tcf compared with 17.75 Tcf produced in 1982. U.S. imports of natural gas in 1983 were estimated at 0.86 Tcf compared with 0.93 Tcf in 1982. The consumption of natural gas in 1983 was estimated at 16.98 Tcf compared with 17.84 Tcf in 1982.

The outlook for natural gas prices was uncertain during most of 1983. Gas markets were increasingly volatile in the context of phased decontrol, and rising prices for natural gas brought about consumer cutbacks and conservation efforts. As fuel prices became more competitive with natural gas prices in many areas of the country during 1982 many industrial users of gas reportedly switched to oil. Substantial capacity was removed from production, and pipelines began cancelling out of higher-priced energy supply contracts in early 1983. The rate of natural gas price increases then tended to level off.

Natural gas consumption in 1984 is expected to exceed the 1983 level, assuming continued economic recovery and a return to normal winter weather. Economic recovery should boost the demand for natural gas, but fuel oils can be expected to remain competitive in this market. Natural gas production is expected to rise above the 1983 level, but the increase may not be sufficient to absorb all existing productive capacity.

Both consumption and production of natural gas declined in 1983 for the fourth consecutive year. Despite large amounts of gas in storage, a mild winter, strong conservation efforts, and industrial fuel switching, natural gas prices continued to rise in the first quarter of 1983 before beginning to level off in the second quarter. Economic recovery throughout 1983 resulted in a fourth-quarter consumption level that was estimated to have exceeded consumption in the fourth quarter of 1982.

The latest figures available from the Department of Commerce indicate that proved reserves of natural gas at the end of 1982 totaled 35.7 billions of barrels of equivalent crude oil. This was unchanged from proven end-of-1981 reserves and up slightly from the 1981 reserve level.

Prospects for natural gas prices and production during 1984 should be determined by greater consumer spending due to economic recovery and to more moderate price increases because of phased price decontrol and expanded production. During 1983, the wellhead price of natural gas in 1972 dollars was estimated at 116.6 cents per million British thermal units (Btu's) compared with 107.1 cents in 1982. Natural gas production in 1984 is tentatively estimated at 17.41 Tcf, up nearly 3 percent from 1983. Consumption of natural gas in 1984 is estimated at 18.16 Tcf, or nearly 7 percent above consumption in 1983.

World Natural Gas Production (Marketed Production[3]) In Thousands of Terajoule[4]

Year	Argentina	Canada	France	Indonesia	W. Germany	Iran	Italy	Mexico	Netherlands	Poland	Romania	United Kingdom	United States	USSR	Venezuela	Australia
1973	238	3,119	262	248	706	702	541	542	2,495	213	980	1,018	22,648	8,346	460	
1974	256	3,046	269	273	713	786	540	561	2,957	203	1,012	1,230	21,601	9,201	476	
1975	278	3,090	260	257	639	771	514	584	3,208	211	1,042	1,274	20,109	10,206	450	
1976[4]	268	2,820	279	115	676	788	600	515	3,422	243	1,384	1,491	20,552	11,194	497	231
1977	271	2,962	299	162	673	743	524	538	3,067	249	1,465	1,536	20,717	12,102	505	264
1978	256	2,856	307	353	720	668	524	669	2,808	244	1,475	1,458	20,654	12,967	509	270
1979	303	3,041	296	482	725	700	538	803	2,936	224	1,409	1,533	21,275	14,160	600	314
1980	327	2,781	287	607	662	279	478	893	2,881	193	1,455	1,469	21,102	15,168	630	354
1981[1]	340	2,746	278	653	674	235	534	945	2,670	214	1,528	1,503	20,910	16,215	571	420
1982[2]	360	2,800	285	1,000	640		530	1,250	2,500	200		1,250	20,000	17,000	800	500

[1] Preliminary. [2] Estimate. [3] Comprises all gas collected & utilized as fuel or as a chemical industry raw material, including gas used in oilfields and/or gasfields as a fuel by producers. [4] Terajoule = 10^{12} Joule = approx. 10^9 BTU. Prior to 1976 data are in billions of cubic feet. *Source: U.S. Dept. of Energy* T.247

United States Recoverable Reserves and Deliveries of Natural Gas In Billions of Cubic Feet

Year	Recoverable Reserves of Natural Gas Dec. 31[3]	Residential	Commercial	Industrial Deliveries						Total Deliveries	Electric Utility Power[2] Plants
		Deliveries		Field	Carbon Black	Petroleum Refineries	Used as Pipeline Fuel	Industrial	Other Consumers		
1973	249,950	4,994	2,283	2,412	50	1,074	728	7,929		19,825	3,605
1974	237,132	4,786	2,263		40	1,040	669			19,077	3,443
1975	228,200	4,924	2,268		26	946	583			17,558	3,158
1976	216,026	5,051	2,668		28	919	548	6,967	285	17,764	3,081
1977	208,878	4,821	2,501		28		533	6,817	257	17,329	3,191
1978	200,302	4,903	2,610				530	6,757	291	17,449	3,188
1979	194,600	4,965	2,786				601	6,899	301	18,141	3,491
1980[1]		4,752	2,611				635	7,172		18,216	3,682
1981[1]		4,546	2,520				642	7,128		17,834	3,640
1982[1]		4,633	2,606				596	5,831		16,295	3,226
1983[4]		4,480	2,428				561	5,597		15,416	2,912

[1] Preliminary. [2] Figures include gas other than natural (impossible to segregate); therefore, shown separately from other consumption. [3] Estimated proved recoverable reserves. [4] Estimated. *Source: U.S. Dept. of Energy* T.251

GAS

Gas Utility Sales in the United States by Types & Class of Service In Millions of Therms

Year	Total Utility Sales	No. of Cust. (Mil.)	Class of Service				Revenue—Mil. $			
			Residential	Commercial	Industrial	Other	Residential	Commercial	Industrial	Other
1973	164,799	43.7	49,936	22,808	83,708	8,347	6,247	2,172	4,197	371
1974	160,003	44.3	48,648	22,934	81,532	6,890	6,899	2,539	5,391	413
1975	148,629	44.6	49,910	23,868	68,371	6,480	8,445	3,303	6,718	608
1976	148,135	44.9	50,142	24,266	71,070	2,696	9,941	4,075	9,374	311
1977	143,409	45.7	49,463	24,094	67,107	2,746	11,541	4,980	11,385	397
1978	147,480	46.0	51,070	25,000	68,410	3,010	12,939	5,696	13,065	451
1979	154,400	46.7	50,830	24,860	75,550	3,160	14,833	6,624	17,045	446
1980	154,190	47.4	48,190	24,444	79,555	2,020	17,408	8,159	22,213	532
1981[1]	153,380	48.0	46,010	23,600	82,220	1,990	19,218	9,231	27,246	645
1982[1]	141,960	48.4	47,380	24,620	68,150	1,810	23,662	11,629	27,294	746
1983[2]	130,000	48.0								

[1] Preliminary. [2] Estimate. *Source: American Gas Association* T.253

Salient Statistics of Natural Gas in the United States

Year	In Billions of Cubic Feet										Value		Avg. Value Delivered to Consumers—Ths. Cu. Ft.		
	Supply				Disposition										
	Marketed Production	Storage Withdrawals	Imports (Consumed) (Bil. Nat. Gas Cu. Ft.)	Total Supply	Consumption	Exports	Stored	Extraction Loss	Adjustments	Total Disposition	At Wells[3] Million $	¢ Ths. cu. ft. At Wells	Residential	Commercial	Electric Utilities
1973	22,648	1,533	1,033	25,213	22,049	77	1,974		196	25,213	4,894	21.6	1.29	.98	.35
1974	21,601	1,701	959	24,260	21,223	77	1,784	887	289	24,260	6,573	30.4	1.43	1.12	.49
1975	20,109	1,760	953	22,821	19,538	73	2,104	872	235	22,821	8,945	44.5	1.71	1.40	.77
1976	19,952	1,921	963	23,030	19,946	65	1,756	854	216	22,837	11,572	58.0	1.98	1.69	1.06
1977	20,025	1,750	1,011	22,809	19,521	56	2,307	863	41	22,786	15,834	79.0	2.35	2.10	1.33
1978	19,974	2,158	966	23,126	19,627	53	2,278	852	287	23,097	18,085	90.5	2.56	2.30	1.48
1979	20,471	2,047	1,253	22,964	20,241	56	2,295	808	372	23,772	24,114	117.8	2.98	2.77	1.80
1980	20,180	1,972	985	22,515	19,877	49	1,949	777	640	23,292		159	3.68		2.28
1981[1]	19,956	1,930	904	22,191	19,404	59	2,228	775	501	22,967		198	4.29		2.91
1982[2]	18,520	2,165	933	21,001	18,001	52	2,472	762	475	21,762		246	5.17		3.49
1983[2]	16,599	2,140	944	19,135	16,970	55	1,685	684	425	19,819		260	5.99		3.58

[1] Preliminary. [2] Estimate. [3] Total value of market production at the wellhead. *Source: U.S. Dept. of Energy* T.248

Natural Gas Consumed[2] in the United States In Billions of Cubic Feet

Year	Arkansas	California	Illinois	Kansas	Louisiana	Michigan	Missouri	New Mexico	New York	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Indiana
1973	329	2,063	1,164	648	2,217	922	427	313	683	1,104	673	783	5,088	196	
1974	291	1,852	1,163	630	2,203	938	410	312	627	1,087	723	716	4,912	192	
1975	259	1,858	1,108	541	1,978	887	370	296	577	957	729	654	4,380	168	
1976	250	1,771	1,188	556	2,216	895	380	341	596	1,006	812	714	4,404	159	425
1977	230	1,772	1,167	507	2,191	741	367	230	562	847	767	668	4,143	145	398
1978	221	1,563	1,175	519	2,249	790	359	214	570	930	770	674	4,211	152	441
1979[1]	251	1,810	1,143	584	1,978	876	347	211	624	898	825	741	4,001	149	504

[1] Preliminary. [2] Includes volume of natural gas which is distributed as a component of mixed gas. *Source: U.S. Dept. of Energy* T.249

United States Marketed Production[1] of Natural Gas In Billions of Cubic Feet

Year	Arkansas	California	Kansas	Alaska	Louisiana	Mississippi	Montana	New Mexico	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Wyoming	Michigan
1972	167	487	889	126	7,973	104	33	1,216	90	1,807	74	8,658	215	375	
1973	158	449	893	131	8,242	100	56	1,219	94	1,771	79	8,514	209	358	
1974	124	365	887	129	7,754	79	55	1,245	92	1,639	83	8,171	202	327	
1975	116	318	844	160	7,091	70	41	1,217	85	1,605	85	7,486	154	316	102
1976	110	354	829	166	7,007	71	43	1,231	89	1,727	89	7,192	153	329	119
1977	104	311	781	188	7,215	83	47	1,203	99	1,770	92	7,051	153	330	130
1978	107	311	854	203	7,476	107	47	1,174	114	1,774	98	6,548	149	357	148
1979	109	248	798	221	7,266	144	54	1,181	123	1,835	96	7,175	151	414	160
1980[2]	112	264	732	226	6,937	165	54	1,142		1,892		7,169	152	382	153

[1] Comprises gas either sold or consumed by producers, including losses in transmission, quantities added to storage and increases of gas in pipelines. [2] Preliminary. *Source: U.S. Dept. of Energy* T.250

Gasoline

(See feature article on page 7.)

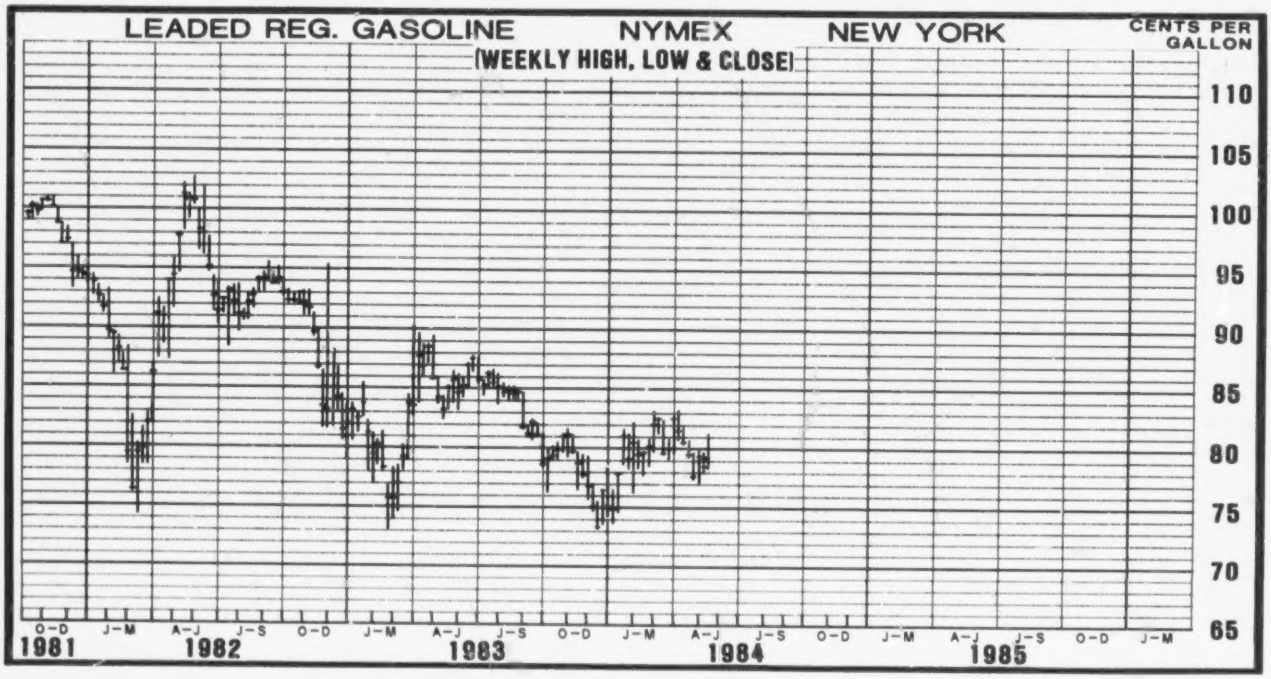
Motor gasoline can be defined as a complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives that have been blended to form a fuel suitable for use in spark ignition engines. Gasoline includes premium and regular grades, both leaded and unleaded, as well as gasahol and other refinery products. The category of gasoline does not include any blendstock until blending has been completed and the blendstock is completely incorporated in the finished gasoline. Premium grade motor gasoline is a finished motor gasoline that has an antiknock designation of 3 or more for unleaded motor gasoline and 4 or more for leaded motor gasoline. Regular grade motor gasoline has an antiknock designation of 2 or less for unleaded motor gasoline and 3 or less for leaded motor gasoline.

In recent years, motor gasoline has accounted for nearly half of the total of petroleum products supplied. Motor gasoline consumption peaks several times each year, particularly during vacation and holiday periods. This means that the demand for motor gasoline is not well explained by weather patterns alone, as is the case with other petroleum products. The demand for motor gasoline is apparently not dependent upon changes toward hotter summers or colder winters. Gasoline consumption is primarily a function of automobile travel, which tends to peak during the summer and in December, regardless of weather.

The prices for motor gasoline have been calculated on a monthly basis by the Bureau of Labor Statistics in conjunction with the construction of the Consumer Price Index (CPI). For the period 1974 through 1978, prices were collected in 56 urban areas. For the period 1978 on, prices were collected from service stations in 85 urban areas selected to represent all urban consumers, or about 80 percent of the total U.S. population. These service stations, which were selected to represent the purchasing habits of the CPI population, included full-service, mini-, and self-service stations. These BLS statistics indicated that, during 1983, the average retail price for all types of motor gasoline was 122.5 cents per gallon compared with 128.1 cents in 1982. Average gasoline prices were 121.3 cents per gallon in January 1983. This price fell to a low of 113.5 cents in March 1983 before moving to a high for the year of 127.2 cents per gallon, achieved in July. Average prices for gasoline varied between the year's high of 127.2 cents and 125.7 cents during July through September—a time of heavy holiday automobile travel—before leveling off slightly in the last quarter of the year. The average price of leaded regular motor gasoline was 115.7 cents per gallon in 1983, down 5 percent from its 1982 average price. Unleaded regular gasoline averaged 124.1 cents per gallon, in 1983, down 4 percent from the preceding year. Finally, the price for leaded premium gasoline was 137.2 cents per gallon in 1983, down 2 percent from 1982. Falling prices for gasoline during 1983 reflected the worldwide glut of petroleum products and softer petroleum prices.

Futures Markets

Futures contracts based upon New York Harbor leaded regular gasoline are actively traded on the New York Mercantile Exchange. Futures trading is also conducted in Gulf unleaded regular gasoline on the Chicago Board of Trade.



Gold

World mine production of gold in 1983 was less than one percent larger than in 1982, according to preliminary U.S. Bureau of Mines data. The Republic of South Africa accounted for 51 percent of estimated 1983 world production, and the Soviet Union accounted for 20 percent of the total. In addition to mine reserves, the world's above-ground stocks of gold totaled at least 2.1 billion ounces, of which 1.14 billion were official stocks of the market economy countries, 0.9 billion ounces were privately held, and 0.07 billion ounces were estimated official stocks of centrally planned economies.

U.S. mine production of recoverable gold in 1983 was nearly 12 percent larger than a year earlier, and the highest production since 1970. Nevada accounted for 46 percent of U.S. mine production, South Dakota—19 percent, and Utah—16 percent. Most domestic gold mines operated at or above 90 percent of capacity, and the relatively high prices of recent years encouraged exploration for, and the development of, new gold deposits. However, underutilization of capacity remained a problem for some domestic primary and secondary refiners of gold. An increasing share of domestic refinery production of gold was accounted for by domestic concentrates and ores in 1983, but old and new scrap continued to account for most of refinery production.

Net imports accounted for an estimated 21 percent of apparent U.S. gold consumption in 1983, according to preliminary Bureau of Mines data. Total U.S. imports for consumption in 1983, including ore and concentrates, waste and scrap, dore and precipitates, and gold bullion were 7 percent less than in 1982. However, imports of the most important import category (refined bullion) were off 15 percent in 1983, to 3.6 million ounces. Canada accounted for 50 percent of total imports, mostly bullion, followed by Uruguay—13 percent; Switzerland—7 percent; and the Dominican Republic—5 percent.

Domestic consumption of gold in arts and industry totaled 3.08 million troy ounces in 1983, down 11 percent from domestic use in 1982. Consumption in jewelry and arts was off 15 percent in 1983, but still accounted for 55 percent of total use. Dental use of gold declined close to 2 percent in 1983. Industrial use of gold in 1983 was slightly more than 1.03 million ounces, off 5 percent from 1982, and it accounted for 33 percent of total domestic use. The electronics industry accounts for most of the industrial use of gold. It is estimated that connectors account for more than 33 percent of the amount of gold used in the electronic industry; semiconductors—21 percent; films—19 percent; and the remainder printed circuits, relays and switches, and electron tubes. The use of gold in electronics is expected to increase in 1984, helped by the economic recovery and the buildup in defense. Overall, the Bureau of Mines looks for close to a 10 percent increase in domestic apparent consumption of gold in 1984, to around 4.2 million troy ounces. From a 1981 base, reported demand is expected to increase at an annual rate of about 2.0 percent through 1990.

U.S. exports of non-monetary gold in 1983, about 60 percent of which consisted of refined bullion, were 6 percent higher in 1983 than in 1982, at 3.14 million ounces. Canada accounted for the bulk of the U.S. gold exports, followed by the United Kingdom, Switzerland, and France.

Of the gold held for foreign and international official accounts at the New York Federal Reserve Bank, deliveries from foreign accounts in 1983 declined 67 percent, to 1.12 million ounces; while deliveries to foreign accounts amounted to 1.34 million ounces, off 36 percent from the 1982 figure. Earmarked gold in these accounts at the end of 1983 totaled 341.40 million troy ounces, slightly below the 348.55 million ounces on hand at the New York Federal Reserve Bank on December 31, 1982.

U.S. industry stocks of gold at the end of 1983 were only 0.624 million ounces, 20 percent lower than a year earlier. Treasury Department holdings, which includes gold in the Exchange Stabilization Fund, amounted to 263.41 million ounces vs. 264.05 million at the end of 1982. Gold held in futures exchange's licensed warehouses totaled 2.53 million ounces, up from 2.20 million at the end of 1982.

Gold bullion prices, as quoted by Engelhard Industries averaged higher in 1983 than in 1982, but trended lower throughout much of 1983. The high price quoted for 1983 of $509.25 per ounce was regis-

World Production of Gold (Mine Output) In Thousands of Fine Ounces (Troy Ounces)

Year	Australia	Zaire (Congo)	Canada	China	Colombia	Ghana	India	Japan	Mexico	Nicaragua	Papua N. Guinea	Philippines	Zimbabwe	South Africa	United States	USSR[1]	Total World[1]
1971	672	172	2,243		189	698	119	255	151	121		637	502	31,389	1,495	6,700	46,495
1972	755	141	2,079		188	724	106	243	146	112		607	502	29,245	1,450	6,900	44,843
1973	554	134	1,954		216	723	105	188	133	85		572	800	27,495	1,176	7,100	43,297
1974	513	131	1,698		265	614	101	140	134	83		538	800	24,388	1,127	7,300	40,124
1975	527	103	1,654		309	524	91	144	145	70		503	600	22,938	1,052	7,500	38,476
1976	503	91	1,692		300	532	101	138	163	76		501	387	22,936	1,048	7,700	39,024
1977	625	80	1,734		257	481	97	149	213	66	740	559	402	22,502	1,100	7,850	38,906
1978	648	76	1,735	150	246	402	89	145	202	74	751	587	399	22,649	999	8,000	39,057
1979	597	70	1,644	200	269	362	85	128	190	61	630	535	388	22,617	964	8,160	38,807
1980	548	40	1,627	225	510	353	79	102	196	60	452	644	368	21,669	970	8,300	39,197
1981[2]	568	70	1,673	1,700	535	330	80	99	203	62	540	753	371	21,121	1,379	8,425	41,227
1982[1]	881	65	2,008	1,800	404	330	70	105	210	65	564	778	420	21,355	1,447	8,550	42,713
1983[1]			2,200	1,900										21,900	1,615	8,600	43,000

[1] Estimated. [2] Preliminary. *Source: U.S. Bureau of Mines*

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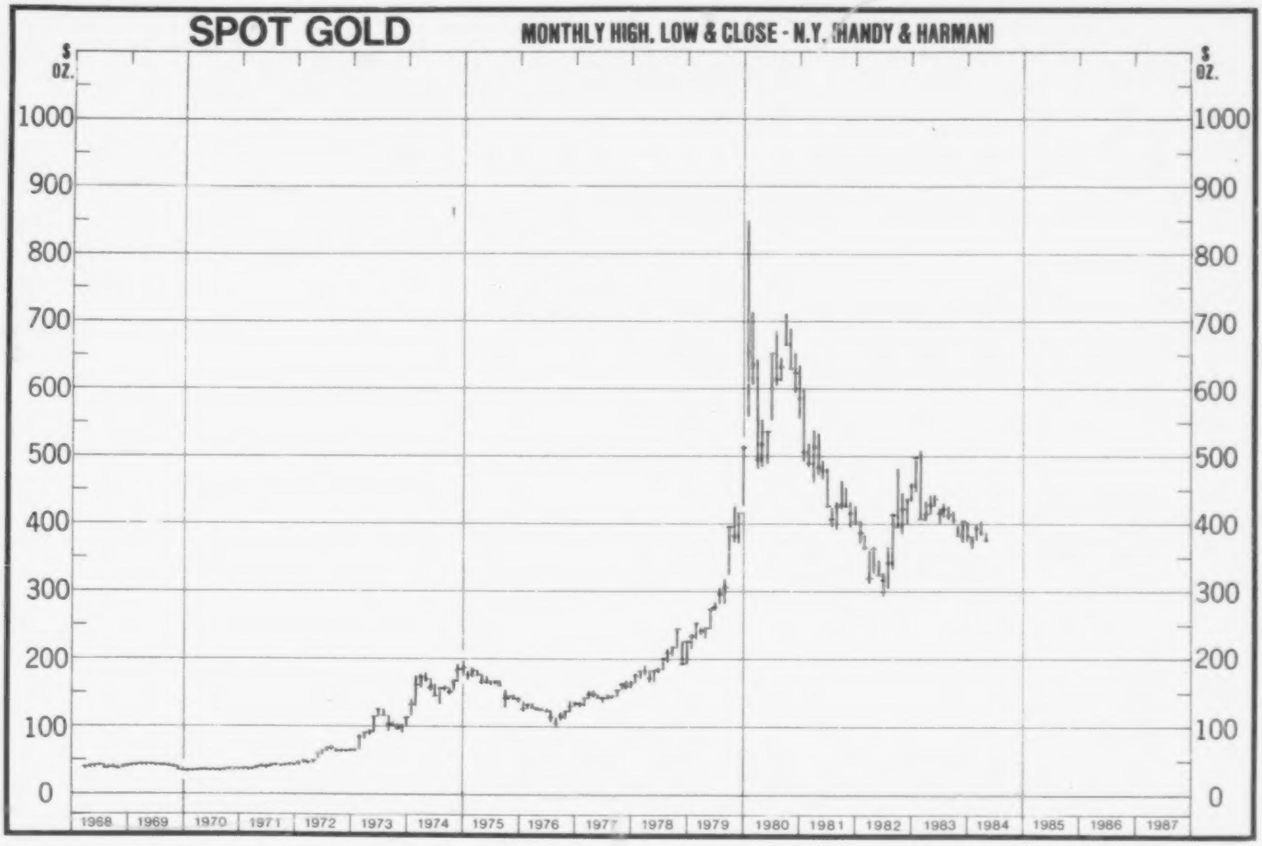
tered on February 15. The low price for 1983 of $374.65 (partly reflecting concern about actual or prospective Central Bank sales, and a reduced rate of inflation) was recorded on November 21. The average price for gold bullion of $424.00 per ounce in 1983 compared with $375.91 in 1982. Prices later declined to $365.10 on January 24, 1984 before recovering to slightly over $400 per ounce late in the first quarter of the year.

Futures Markets

Gold futures in the U.S. are traded on the Commodity Exchange, Inc. (COMEX) in New York, the International Monetary Market (IMM) and the Mid-America Commodity Exchange in Chicago. Futures trading is also conducted on the London Gold Futures Market, and in Winnipeg, Hong Kong, and Tokyo. Gold futures options are traded on COMEX.



Salient U.S. Gold Statistics In Thousands of Troy Ounces

			Refinery Prod.				Stocks, Dec. 31				Consumption				
Year	Mine Production	Value Mil. $	New (Domestic)	Secondary [8]	Exports[2]	Imports[2] For Consumption	Treas. Dept.[6]	Futures Exch.	Earmarked[7]	Industrial	Dental	Jewelry Industrial[3]	& Arts	Total	Price $ Per Troy Oz.[4]
1972	1,450	85.0	1,478	2,107	1,472	6,126				4,407	750	2,191	4,344	7,285	58.60
1973	1,176	115.0	1,210	1,779	2,985	3,845				4,498	679	2,577	3,473	6,729	97.81
1974	1,127	180.0	1,021	1,926	3,963	2,651				5,670	509	1,740	2,402	4,651	161.08
1975	1,052	169.9	1,093	2,696	3,496	2,662	274.7	.8	396.6	.5	595	1,059	2,080	3,993	161.49
1976	1,048	131.3	954	2,504	3,531	2,656	274.7	.9	388.8	.3	694	1,233	2,562	4,648	125.32
1977	1,100	163.2	956	2,454	8,671	4,454	277.6	1.8	378.7	2.0	728	1,209	2,558	4,863	148.31
1978	999	193.3	962	3,085	5,509	4,690	276.4	2.7	366.2	1.7	706	1,313	2,651	4,738	193.55
1979	964	296.6	795	2,883	16,499	4,630	264.6	2.5	359.3	.9	646	1,406	2,688	4,785	307.50
1980	970	594.1	773	3,824	6,119	4,542	264.3	5.0	354.5	.9	341	1,287	1,505	3,215	612.56
1981	1,379	633.9	801	3,085	6,437	4,652	264.1	2.4	350.6	.6	314	1,210	1,730	3,276	459.64
1982[1]	1,447	543.9	719	3,017	2,970	4,920	264.0	2.3	348.6	.8	358	1,085	1,996	3,448	375.91
1983[5]	1,615	685.0	893	3,000	3,139	4,593	263.4	2.5	341.4	.6	352	1,030	1,696	3,081	424.00

[1] Preliminary. [2] Excludes coinage. [3] Including space & defense. [4] Engelhard selling quotations. [5] Estimate. [6] Includes gold in Exchange Stabilization Fund. [7] Gold held for foreign & international official accounts at N.Y. Fed. Reserve Bank. [8] Old & new scrap. *Source: Bureau of Mines*

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GOLD

High, Low & Closing Prices of December Gold Futures on COMEX In Dollars per Ounce

Year of Delivery		Year Prior to Deliv.			Delivery Year												Life of Delivery Range
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1978	High	179.1	183.6	179.3	191.7	196.5	204.3	193.9	194.3	195.5	210.0	221.5	224.6	249.4	230.7	221.0	249.4
	Low	166.1	167.7	167.8	176.7	183.3	186.1	172.8	175.6	187.2	188.6	201.5	207.6	220.2	191.2	193.0	152.0
	Close	175.0	173.4	178.7	189.4	195.0	194.1	177.0	192.8	189.2	209.8	210.6	220.9	240.7	193.2	219.3	—
1979	High	274.6	257.0	250.8	263.0	278.0	271.6	264.1	291.6	297.6	319.5	330.0	409.0	444.5	421.0	510.0	510.0
	Low	242.0	213.1	214.0	237.2	248.5	251.5	244.0	258.9	284.4	292.4	288.0	330.5	373.0	365.0	424.0	187.6
	Close	267.0	214.9	249.8	253.2	271.6	256.6	262.4	290.7	293.5	297.3	326.7	404.5	385.7	419.1	506.3	—
1980	High	491.5	478.5	625.0	959.9	840.0	757.9	625.0	582.6	693.0	726.0	679.5	748.5	708.5	665.0	638.5	959.9
	Low	420.5	426.0	483.0	644.1	709.0	519.0	533.0	518.4	582.0	620.0	620.0	656.0	627.0	593.0	539.0	270.3
	Close	439.8	476.8	619.1	789.5	732.8	570.3	543.4	575.7	679.8	642.0	656.0	688.5	642.0	624.6	606.5	—
1981	High	814.0	779.0	753.0	690.0	585.5	605.7	585.5	549.0	523.5	453.0	463.0	482.4	469.0	436.0	428.5	981.0
	Low	733.5	695.0	640.0	551.0	538.0	497.2	512.0	502.0	445.5	417.0	405.0	428.0	426.5	392.5	394.5	392.5
	Close	750.2	738.7	680.1	563.4	536.5	562.1	529.5	518.6	449.5	423.2	443.5	443.0	431.2	408.3	393.3	—
1982	High	539.0	500.0	478.0	455.0	433.0	399.5	402.5	375.8	360.0	385.3	441.0	509.0	465.0	443.5	459.5	675.9
	Low	493.0	437.0	441.0	410.0	396.0	340.0	352.0	342.0	311.5	322.5	340.2	396.0	390.0	398.0	431.1	311.5
	Close	496.6	454.1	446.5	428.3	397.8	357.6	369.8	343.0	333.2	355.5	418.5	404.8	423.0	442.6	458.2	—
1983	High	503.0	486.0	505.5	553.0	553.5	467.5	472.0	472.5	442.8	455.0	441.0	429.0	408.8	408.8	404.0	554.7
	Low	433.0	437.5	470.0	486.5	453.4	431.5	444.5	432.0	414.0	423.0	418.5	401.0	378.0	373.0	372.0	366.7
	Close	465.0	486.4	489.0	551.7	453.4	442.4	453.5	432.6	432.3	427.4	424.8	407.8	378.8	403.0	379.0	—
1984	High	450.0	452.0	443.5	419.7	434.0	439.5	416.5									
	Low	419.5	412.1	411.0	393.0	405.0	414.0	399.5									
	Close	411.1	445.1	421.4	404.9	426.9	416.4	401.1									

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

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Gold Total Open Interest at New York (COMEX) & Chicago IMM In Thousands of Contracts

Year	At New York (COMEX)												At Chicago (IMM)			
	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Apr. 1	July 1	Oct. 1
1978	54.1	55.6	64.3	58.2	51.8	50.4	52.8	60.3	67.8	88.2	116.7	130.7	37.6	40.0	52.8	86.6
1979	183.2	165.4	173.2	160.5	165.2	160.7	143.6	177.9	176.1	171.3	176.2	197.9	99.9	68.7	74.5	61.7
1980	240.1	170.1	163.6	131.8	125.0	108.8	169.3	152.4	166.0	208.4	252.9	254.4	79.6	27.0	60.0	79.9
1981	295.5	211.4	202.5	180.8	187.9	198.6	214.7	215.9	203.1	198.6	202.6	187.3	88.6	54.8	78.5	56.5
1982	175.6	153.0	145.8	134.8	134.6	131.2	139.1	119.0	119.0	110.6	112.6	121.8	33.1	18.7	14.1	8.0
1983	127.7	120.4	123.7	91.6	105.2	109.8	113.4	104.7	114.0	123.4	134.9	126.6	7.9	5.2	4.9	3.3
1984	139.7	121.6	140.8	120.8	134.1								1.4	.6		
1985																

Source: Commodity Exch., Inc. of N.Y. (COMEX) & International Monetary Market of Chicago (IMM)

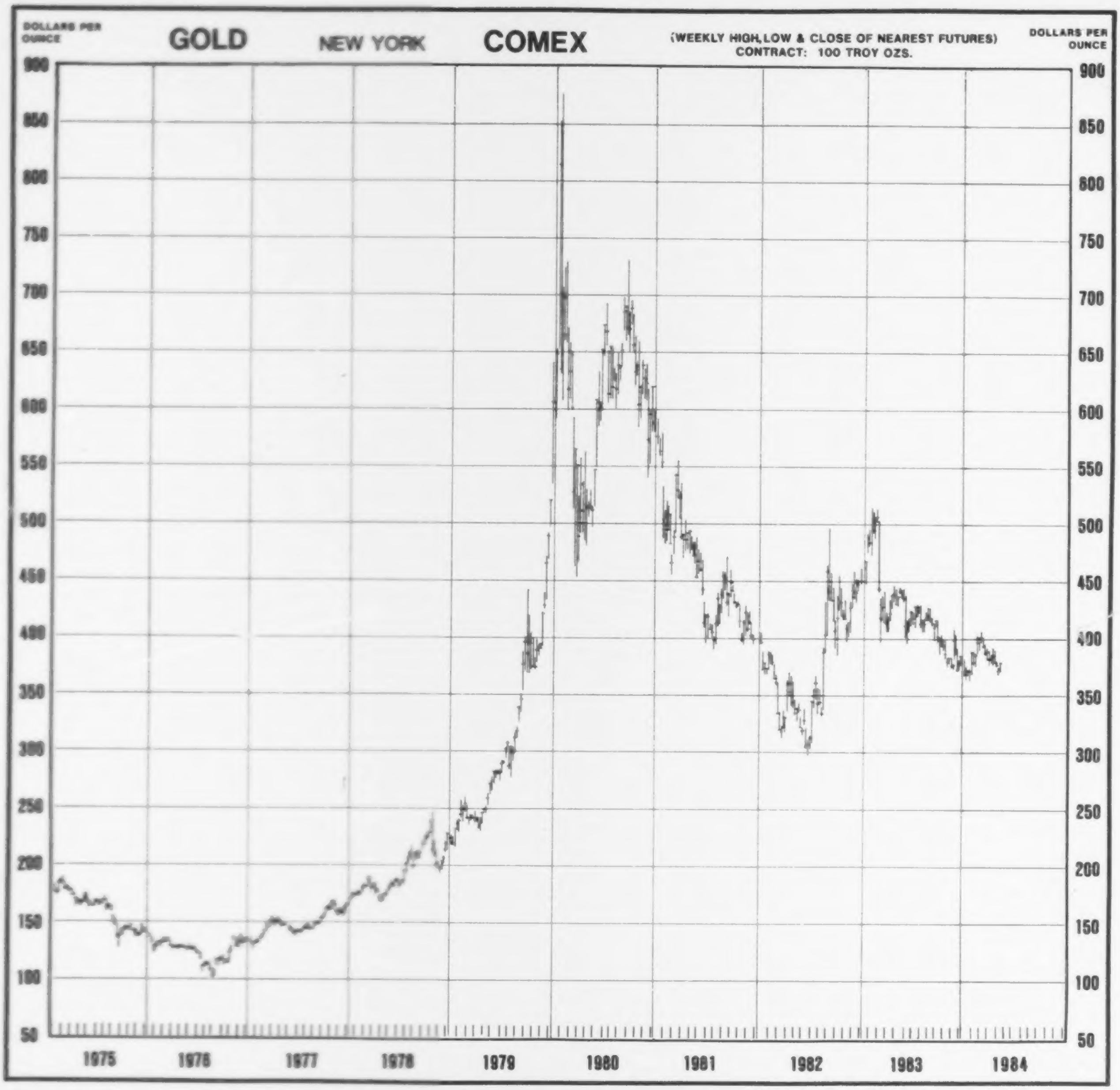
T.261

Total Volume of Trading of Gold Futures at New York (COMEX) In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	230.6	170.9	267.7	176.6	176.6	162.5	202.6	411.4	374.4	460.6	550.6	557.9	3,742
1979	607.7	506.8	386.2	335.9	557.9	527.9	601.0	591.3	594.5	552.8	565.5	714.5	6,542
1980	829.3	378.3	560.0	316.1	391.2	652.7	747.2	460.5	839.5	863.5	938.4	1,024.7	8,001
1981	943.6	708.7	994.5	695.7	782.6	780.1	836.5	862.1	1,063.4	769.0	886.8	1,050.5	10,374
1982	922.4	669.0	1,264.7	966.3	708.7	943.3	1,153.5	1,182.7	1,224.7	1,074.1	1,044.2	1,116.6	12,289
1983	1,369.0	1,047.4	1,087.6	712.7	872.2	839.9	818.6	684.1	694.1	832.7	780.5	643.8	10,383
1984	749.3	786.5	829.8	563.2									
1985													

Source: Commodity Exchange, Inc.—N.Y. (COMEX)

T.265



Monthly Average Gold Price (Unfabricated)—Engelhard Industries $ Per Troy Oz.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	176.8	180.0	178.6	170.3	167.9	164.7	165.7	163.5	144.1	143.3	143.3	139.8	161.49
1976	125.3	131.7	133.1	128.4	127.4	126.2	118.0	110.1	114.7	116.6	131.4	134.4	124.77
1977	132.9	136.7	148.7	149.7	147.2	141.5	144.0	145.5	150.1	159.4	162.8	161.1	148.31
1978	173.7	178.6	184.1	175.8	176.5	184.1	189.3	206.3	212.4	227.7	206.2	208.1	193.55
1979	227.6	245.8	242.4	239.1	257.6	275.4	295.3	301.7	357.2	392.0	392.6	459.0	307.50
1980	675.4	665.3	553.6	516.8	514.0	600.7	643.3	627.5	675.8	661.2	622.4	594.9	612.56
1981	557.4	500.3	498.8	494.9	479.8	460.8	408.9	410.9	444.1	437.8	412.9	409.3	459.64
1982	384.1	374.1	330.0	350.0	334.0	315.0	340.1	366.0	435.6	422.2	414.2	444.7	375.91
1983[2]	479.8	490.4	419.7	432.1	437.7	412.8	423.4	416.3	411.5	394.0	382.4	388.0	424.00
1984[1]	371.3	386.4	394.0										

[1] Estimate. [2] Preliminary. *Source: U.S. Bureau of Mines*

T.259

GOLD

Commodity Exchange Inc. (COMEX) Warehouse Stocks of Gold In Thousands of Ounces

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1975			301.6	428.7	328.1	442.3	465.8	527.0	562.6	590.6	559.2	517.1
1976	403.2	369.1	342.0	350.8	364.8	355.5	327.3	282.3	270.0	273.1	258.2	258.7
1977	291.8	364.2	359.0	379.9	409.3	454.1	466.7	522.4	601.8	601.2	946.4	1,788
1978	1,822	2,084	2,480	2,736	2,883	2,864	2,796	2,894	2,870	2,734	2,780	2,629
1979	2,604	2,566	2,540	2,501	2,286	2,443	2,700	2,480	2,509	2,512	2,281	2,277
1980	2,253	2,445	2,575	2,897	3,097	3,291	3,386	3,597	3,619	3,832	4,873	5,099
1981	4,814	4,570	4,192	3,897	3,513	3,585	3,417	3,258	2,887	2,776	2,605	2,494
1982	2,366	2,339	2,267	2,196	2,198	2,181	2,047	1,980	1,982	1,971	1,985	2,137
1983	2,247	2,621	2,754	2,645	2,636	2,723	2,630	2,648	2,570	2,538	2,500	2,485
1984	2,481	2,472	2,408	2,452	2,412							
1985												

Source: Commodity Exchange, Inc.—N.Y. T.263

U.S. Mine Production of Recoverable Gold In Thousands of Troy Ounces

Year	Alaska	Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	South Dakota	Utah	Other States	Total U.S.
1971	13.0	94.0	3.0	42.0	3.6	15.6	374.9	10.7	513.4	369.0	55.9	1,495.1
1972	8.6	103.0	3.4	61.1	2.9	23.7	419.7	14.9	407.4	362.4	41.8	1,449.9
1973	7.1	102.8	3.6	63.4	2.7	27.8	260.4	13.9	357.6	307.1	29.2	1,175.8
1974	9.1	90.6	5.0	52.1	2.9	28.3	298.8	15.4	343.7	254.9	26.0	1,126.9
1975	15.0	85.8	9.6	55.5	2.5	17.3	332.8	15.0	304.9	189.6	24.2	1,052.3
1976	22.9	102.1	10.4	50.8	2.8	24.1	288.0	15.2	318.5	187.3	26.1	1,048.0
1977	19.0	90.2	5.7	72.7	12.9	22.3	324.0	13.6	304.8	210.5	24.0	1,100.3
1978	18.7	93.0	7.5	32.1	20.5	20.0	260.9	9.9	285.5	235.9	14.6	998.8
1979	6.7	101.8	5.0	13.9	24.1	24.1	250.1	15.0	245.9	260.9	16.3	964.4
1980	12.9	79.6	4.1	39.4	[2]	48.4	278.5	15.8	267.6	179.5	40.0	969.8
1981	26.5	100.3	6.3	51.1	[2]	54.3	524.8	65.7	278.2	227.7	44.3	1,379.2
1982	30.5	61.1	10.5	65.6	[2]	75.2	738.3	[2]	185.0	174.9	105.8	1,446.9
1983[1]	30.5	64.7	[2]	[2]	[2]	71.9	740.7	[2]	307.5	258.2	146.4	1,619.9
1984												

[1] Preliminary. [2] Included in "OTHER STATES." *Source: Bureau of Mines* T.262

U.S. Monetary Stock of Gold at End of Month In Billions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	10.73	10.73	10.73	10.73	10.33	10.33	10.33	10.33	10.13	10.13	10.13	10.13
1972	10.13	9.59	9.59	9.59	10.41	10.41	10.41	10.41	10.41	10.41	10.41	10.41
1973	10.410	10.410	10.410	10.410	10.410	10.410	10.410	10.410	10.410	11.567	11.567	11.567
1974	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.652
1975	11.635	11.621	11.620	11.620	11.620	11.620	11.618	11.599	11.599	11.599	11.599	11.599
1976	11.599	11.599	11.599	11.598	11.598	11.598	11.598	11.598	11.598	11.598	11.598	11.598
1977	11.658	11.650	11.636	11.636	11.629	11.620	11.595	11.595	11.595	11.595	11.595	11.719
1978	11.718	11.718	11.718	11.718	11.718	11.706	11.693	11.679	11.668	11.655	11.642	11.671
1979	11.592	11.544	11.479	11.418	11.354	11.323	11.290	11.259	11.228	11.194	11.112	11.112
1980	11.172	11.172	11.172	11.172	11.172	11.172	11.172	11.172	11.168	11.163	11.162	11.160
1981	11.159	11.156	11.154	11.154	11.154	11.154	11.154	11.154	11.152	11.152	11.151	11.151
1982	11.151	11.150	11.150	11.149	11.149	11.149	11.149	11.148	11.148	11.148	11.148	11.148
1983	11.144	11.139	11.138	11.135	11.132	11.131	11.131	11.128	11.128	11.126	11.123	11.121
1984	11.120											
1985												

Source: Federal Reserve Board T.264

Grain Sorghums

U.S. sorghum stocks at the beginning of the 1983/84 season on October 1, 1983 totaled 399 million bushels, 34 percent above a year earlier. However, virtually all of the carryover was tied up in loans and CCC inventory. Harvested acreage in 1983 was 34 percent below that of 1982, primarily because of the PIK program. In addition, the yield per harvested acre dropped 17 percent, reflecting the impact of the drought. As a result, the 483 million bushel crop was 43 percent below 1982 production, and the total 1983/84 supply of 882 million bushels was 22.5 percent less than in the preceding season.

Stocks of sorghum in all positions on January 1, 1984—mostly off-farm—amounted to 651 million bushels, down 160 million from a year earlier. Most of the stocks were concentrated in Nebraska, Kansas, and Texas. Total use during October–December 1983 of 232 million bushels was 29 percent less than a year earlier. Exports amounted to 62.1 million bushels versus 67 million in the same period of 1982. Food, seed, and industrial use was about the same as the 2.3 million total for October–December 1982. However, feed and residual use, at 167.1 million bushels, was 91 million bushels (35 percent) below the 258.1 million used a year earlier. The decrease in feed use was attributed to two factors. First, a large part of the supply was isolated from the market in the farmer-owned -reserve (FOR) and CCC inventories. (As of January 1, 1984 190 million bushels were estimated to be in CCC inventory vs. 47 million a year earlier, 245 million bushels were in the FOR vs. 383 million, and 9 million bushels were under loan vs. 19 million on January 1, 1983.) Second, wheat prices were competitive with sorghum in the Southern Plains, which resulted in wheat replacing a significant amount of sorghum in cattle feeding. Wheat was expected to continue to replace sorghum in cattle feeding in the Southern Plains as long as it was a better buy.

April 1, 1984 stocks of sorghum in all positions totaled 465 million bushels, 25 percent less than a year earlier, with indicated total disappearance during January–March of 188 million bushels, down 2 percent from the comparable quarter a year earlier.

The USDA in April 1984 projected feed use of sorghum for the entire 1983/84 season at 400 million bushels versus 515 million in 1982/83, and exports at 225 million bushels versus 214 million in the 1982/83 season. Carryover on September 30, 1984 was projected at 247 million bushels compared with 399 million a year earlier.

U.S. Government Price Support

The target price for 1984-crop sorghum was established at $5.14 per cwt. ($2.88 per bushel), up from $4.86 ($2.72 per bushel) for the 1983 crop. The 1984-crop national average loan rate was established at $4.32 per cwt. ($2.42 per bushel) compared with $4.50 per cwt. ($2.52 per bushel) for the previous crop. Loans are available through May 31, 1985. Loans mature on demand, but no later than the last day of the 9th calendar month following the month that the loan is made. At any time prior to the final maturity date of the loan, producers may repay the loan amount plus any interest that has accrued. If the loan is not repaid by the final loan maturity date, the Commodity Credit Corporation (CCC) takes title to the commodity as full payment of the loan and interest charges.

In early April 1984, the USDA reported that no deficiency payments were due sorghum producers who took part in the 1983 feed grain program, because the national weighted average market price of $2.76 per bushel during October–February above the 1983-crop loan rate of $2.52 per bushel.

Salient Statistics of Grain Sorghums in the United States

Crop Year	Acreage Planted² for All Purposes	Acreage Harv.	For Grain				For Silage			For Forage	Sorghum		Feed Grains U.S. Exports Under Gov't. Programs	
	— 1,000 Acres —		Production 1,000 Bushels	Yield Per Harv. Acre Bushels	Price Cents Per Bushel	Produc. Value 1,000 Dollars	Acreage Harv. 1,000 Acres	Production 1,000 Tons	Yield Per Harv. Acre Tons	Acreage Harv. 1,000 Acres	Used on Farms where Produced —(In Mil. Bushels)—	Sold	Mutual Security (AID) —(In Ths. Metric Tons)—	Total
1980–1	15,644	12,522	579,197	46.3	294	1,696,008	732	7,002	9.6	1,410	195.5	392.5	224	1,129
1981–2	16,020	13,716	879,222	64.1	239	2,087,223	772	9,312	12.1	1,080			444	1,244
1982–3¹	16,138	14,248	841,369	59.1	222	1,856,239	593	7,326	12.4	926			323	716
1983–4¹	11,782	9,900	483,056	48.8	250	1,208,000	634	6,558	10.3	666				
1984–5¹	14,816													

¹ Preliminary. ² Grain and sweet sorghums for all uses including sirup. *Source: Crop Reporting Board, U.S.D.A.* T.267

Production of All Sorghums for Grain in the United States, by States In Thousands of Bushels

Year	Iowa	Arizona	California	Colorado	Kansas	Missouri	Nebraska	New Mexico	No. Carolina	Oklahoma	South Dakota	Texas	Arkansas
1979	1,406	1,775	10,500	12,920	246,330	59,040	151,680	13,416	3,750	23,175	15,525	243,000	10,912
1980	1,330	1,950	11,096	12,250	149,640	41,280	121,800	10,280	2,232	16,320	10,725	181,700	5,887
1981	1,600	2,158	8,880	12,775	238,520	75,200	164,800	12,240	4,134	22,050	19,565	273,420	16,986
1982	650	1,260	10,010	12,920	207,700	70,470	121,910	14,100	3,710	19,890	17,250	305,250	15,780
1983¹	840	1,027	5,670	9,300	116,100	40,800	60,000	6,300	1,470	11,880	13,630	156,500	17,600

¹ Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.268

GRAIN SORGHUMS

U.S. Grain Sorghum Quarterly Supply and Disappearance In Millions of Bushels

Year & Period Beginning Oct. 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Begin. Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed & Resid.	Total	Exports	Total	Gov't. Owned[1]	Privately Owned[2]	Total Stocks
1980-1	146.5	579.2	[4]	725.7	5.0	4.3	2.0	301.2	312.5	304.6	617.1	38.2	70.4	108.6
Oct.-Dec.	146.5	579.2	[4]	725.7	1.6	1.2	—	192.3	195.1	66.2	261.3	43.7	420.7	464.4
Jan.-Mar.	464.4	—	[4]	464.4	1.6	.9	.2	63.8	66.5	84.1	150.6	43.5	270.3	313.8
Apr.-May	313.8	—	[4]	313.8	.8	.7	1.2	84.8	87.5	41.7	129.2	43.8	140.7	184.6
June-Sept.	184.5	—	[4]	184.6	1.0	1.5	.6	-39.7	-36.6	112.6	76.0	38.2	70.4	108.6
1981-2	108.6	879.2	[4]	987.8	4.3	4.8	2.0	431.0	442.1	249.1	691.2	42.9	253.7	296.6
Oct.-Dec.	108.6	879.2	[4]	987.8	1.3	1.3	—	217.9	220.5	77.8	298.3	38.4	651.1	689.5
Jan.-Mar.	689.5	—	[4]	689.5	1.3	1.3	.2	150.5	153.3	74.3	227.6	38.2	423.7	461.9
Apr.-May	461.9	—	[4]	461.9	2.5	.8	1.2	57.8	60.3	21.8	82.1	40.3	339.5	379.8
June-Sept.	379.8	—	[4]	379.8	1.2	1.4	.6	4.8	8.0	75.2	83.2	42.9	253.7	296.6
1982-3[3]	296.6	841.4	[4]	1,138	4.2	3.9	1.8	514.7	524.6	214.5	739.1	175.6	223.3	398.9
Oct.-Dec.	296.6	841.4	[4]	1,138	1.4	1.0	—	258.1	260.5	67.0	327.5	46.7	763.8	810.5
Jan.-Mar.	809.1	—	—	809.1	1.2	1.0	.1	125.6	127.9	62.7	190.6	47.8	572.1	619.9
Apr.-May	620.3	—	—	620.3	.4	.6	.8	75.9	77.7	14.1	91.8	54.0	474.1	528.1
June-Sept.	461.9	—	—	111.2	1.2	1.3	.9	55.1	58.5	70.7	129.2	175.6	223.3	398.9
1983-4[5]	398.9	483.1	—	882.0	10.0			450.0	460.0	200.0	660.0			222.0
Oct.-Dec.	398.9	483.1	—	882.0	1.3	1.0	—	167.1	169.4	62.1	231.5	190.0	460.5	650.5
Jan.-Mar.														

[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary. [4] Less than 50,000 bushels. [5] Estimate. *Source: Commodity Economics Division, U.S.D.A.* T.269

Average Price of Sorghum Grain, No. 2, Yellow at Kansas City In Dollars Per 100 Pounds (Cwt.)

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1977-8	3.05	3.40	3.36	3.37	3.49	3.78	3.92	3.92	3.82	3.54	3.41	3.43	3.54
1978-9	3.61	3.67	3.64	3.71	3.73	3.77	3.81	3.92	4.41	4.89	4.44	4.34	4.00
1979-0	4.42	4.41	4.57	4.21	4.35	4.20	4.15	4.31	4.49	5.36	5.71	5.61	4.65
1980-1	5.65	5.91	5.82	5.79	5.52	5.46	5.49	5.38	5.23	5.29	4.58	4.16	5.36
1981-2	4.14	4.14	4.27	4.44	4.26	4.28	4.45	4.48	4.50	4.38	4.02	4.06	4.29
1982-3[1]	3.85	4.25	4.37	4.54	4.87	5.08	5.30	5.37	5.37	5.32	5.69	5.55	4.96
1983-4[1]	5.37	5.25	5.16	5.09	5.03	5.40							

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.271

U.S. Exports of Grain Sorghums, by Country of Destination In Thousands of Metric[2] Tons

Yr. Beg. October	Poland	Belg. & Luxem.	Portugal	Spain	W. Germany	India	Venezuela	Israel	Japan	Senegal	Netherlands	Norway	Mexico	South Africa	Total All Exports
1977-8[2]	383.7	87.1			.2	—		633.9	2,439.8	60.6	6.7		468.0	—	5,422.9
1978-9	136.4	—			.8	—		689.4	1,981.1	1.2	37.8	141.5	1,124.0	—	5,247.1
1979-0	107.5	.3			.3	—		348.0	3,972.7	12.5	69.1	232.8	2,255.2	—	8,199.2
1980-1	—	60.0			—	—	501	449.0	2,725.4	13.3	11.5	198.9	2,646.3	.3	7,701.6
1981-2[1]	—	.4			.4	—	713	368.0	2,436.9	1.9	.4	201.2	544.2	—	6,289.8
1982-3[1]							231	432	926				3,196		5,721

[1] Preliminary. [2] Data prior to 1977-8 are in THOUSANDS OF BUSHELS. *Source: Grain & Feed Division, U.S.D.A.* T.270

Grain Sorghum Price Support Program & Market Prices

Year Beginning October	Price Support Operations (Million Bushels)										No. 2 Yellow ($ Cwt.)			
	Placed Under Price Support													
	Loans	Purchase Agreements	Total	Redeemed by Farmers	Delivered to CCC	In Reserve Prog.	Loans Outstanding	Owned by CCC October 1	Support Loan — $ Per Cwt. —	Target Price	Kansas City	Fort Worth	Los Angeles	Gulf Ports
1977-8	217			133	41	1	0	0	3.39	4.07	3.54	3.88	4.82	4.16
1978-9	92			87	5	0	0	0	3.39	4.07	4.00	4.40	5.44	4.65
1979-0	64			64	0	0	0	0	3.57	4.18	4.65	4.97	6.32	5.54
1980-1	32			21	1	10	—	10	3.82	4.46	5.36	5.86	7.31	6.16
1981-2[2]	277			35	7	223	12	235	4.07	4.55	4.29	4.85	6.18	4.97
1982-3[2]	44			0	0	39	5	44	4.32	4.64	4.96	5.30		5.55
1983-4[2]									4.50	4.86	5.22	5.46		5.95

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.* T.272

Hard Fibers

World Production of Hard Cordage Fibers In Thousands of Metric Tons[2]

Year	Abaca: Philippines	Abaca: Ecuador	Abaca: Others	Abaca: World Total	Sisal: Tanzania	Sisal: Haiti	Sisal: Brazil	Sisal: Angola	Sisal: Madagascar	Sisal: Mozambique	Sisal: Kenya	Sisal: World Total	Henequen: Mexico	Henequen: Others	Henequen: World Total
1970	179.2	*Avg.*	*Avg.*	184.2	445.8	42.0	452.0	115.2	*Avg.*	63.9	96.8	1,347	307.5	*Avg.*	353.0
1971	149.0	(*1.0*	(*1.0*	155.6	399.0	28.7	463.0	143.3	(*14.0*	55.1	98.8	1,340	320.0	(*24.2*	335.5
1972	161.4	*M.T.*)	*M.T.*)	169.1	346.0	31.1	573.2	150.0	*M.T.*)	48.5	90.8	1,400	320.0	*M.T.*)	357.0
1973[2]	82.2	4.6	1.0	87.8	155.4	17.0	260.0	70.0	22.0	23.0	70.0	653.0	155.0	16.0	171.0
1974	87.0	9.5	2.0	98.5	135.4	19.0	225.0	70.0	22.6	18.8	86.0	615.1	148.7	14.6	163.3
1975	46.1	9.9	1.5	57.5	123.0	12.0	185.0	40.0	21.0	15.0	43.6	477.0	115.0	14.0	129.0
1976	72.5	13.2	1.5	87.2	119.0	5.0	165.0	25.0	18.6	19.0	33.6	422.5	116.0	14.0	130.0
1977	67.8	9.8	1.5	79.1	105.0	6.0	170.0	3.0	18.8	14.0	32.2	381.5	102.0	6.5	108.5
1978	66.0	11.2	1.5	78.7	92.0	9.0	151.0	7.0	15.9	14.0	31.5	350.4	85.0	6.6	91.6
1979	76.8	9.8	1.5	88.1	81.4	11.0	197.0	7.8	14.9	11.0	36.5	389.6	82.0	6.5	88.5
1980[1]	72.3	10.2	1.5	84.0	77.0	16.0	205.0	8.5	16.0	12.0	47.5	412.0	86.0	6.5	92.5
1981[3]	75.0	10.2	1.5	86.7	81.0	10.0	190.0	9.0	16.0	12.0	31.8	379.8	89.0	6.5	95.5
1982	—Discontinued—														

[1] Preliminary. [2] Data prior to 1973 are in MILLIONS OF POUNDS. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.273

Imports[2] of Hard Fibers into the U.S., by Country of Origin In Thousands of Metric[3] Tons

Year	Abaca (or Manila): Philippines	Abaca (or Manila): Other	Abaca (or Manila): Ecuador	Abaca (or Manila): Total (All)	Henequen: Mexico	Henequen: Total (All)	Coir	Sisal: Haiti	Sisal: Brazil	Sisal: Kenya	Sisal: Tanzania & Uganda	Sisal: Mozambique	Sisal: Total (All)	Kapok: Total (All)	Kapok: Thailand
1970	19.0	— 1.9—		21.2	26.8	26.8	2.8	7.0	13.8	—	9.7	—	31.8	11.5	10.6
1971	14.7	— 1.4—		16.2	39.1	39.1	2.6	3.2	8.8	—	7.6	.3	21.8	12.2	11.2
1972	19.0	— 2.0—		21.0	35.5	35.5	3.7	.4	6.8	—	4.5	.7	13.8	11.0	10.1
1973	17.7	— 2.9—		20.5	17.5	17.5	5.6	3.3	7.5	—	2.1	—	14.3	13.6	13.3
1974	30.0	— 6.2—		36.2	.6	.6	9.2	2.4	3.9	—	2.1	.1	9.6	10.1	9.8
1975	9.4	— 9.1—		18.6			6.1	.6	5.4	—	.5	.6	8.8	6.3	6.2
1976	14.2	— 8.0—		22.2	.3	.3	6.4	.2	7.1	—	4.0	1.6	14.5	7.5	7.5
1977[3]	14.3	—12.3—		26.7	.1	.1	8.6	—	9.1	1.3	1.0	.2	11.9	5.8	5.8
1978	13.9			22.1	.4	.4	9.7	.1	7.9	12.5	.7	0	21.5	6.3	6.2
1979	16.5	.1	8.1	24.7	.2	.2	10.5	.3	4.9	1.9	.3	.6	8.1	4.8	4.7
1980	19.1	.5	6.6	26.1	.2	.2	11.2	1.4	1.5	1.1	.6	0	4.9	3.1	2.9
1981[1]	13.3	—	7.3	20.6	.1	.1	9.2	.2	1.8	1.3	.2	—	3.5	2.4	2.3
1982	—Discontinued—														

[1] Preliminary. [2] Imports for consumption. [3] Data prior to 1977 are in THOUSANDS OF LONG TONS. *Source: Dept. of Commerce* T.274

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Hay

Severe drought last summer, particularly in the Corn Belt, limited hay production during 1983 to 142.7 million tons, 6 percent below the record 152 million tons harvested during 1982. Although the area harvested had decreased less than 1 percent, to 60.4 million acres from 60.7 million, the 1983 yield was 2.36 tons per acre, 6 percent less than the 1982 yield of 2.5 million. As a direct result of the drought and subsequent reduced hay crop, stocks on farms were 90.7 million tons as of January 1, 1984, 16% less than a year earlier, 9.3 percent less than in 1982, and 2 percent less than on January 1, 1981. Adding carryover stocks of 29 million tons to the 1983 hay crop gave a total supply of 171.7 million tons available for the 1983/84 crop year from May to April vs. the record supply of 177.9 million registered for 1979/80.

The production of alfalfa and alfalfa mixtures of hay still accounted for a greater percent of the harvest than other types of hay. Mixture production in 1983 totaled 83.5 million tons down from 90.7 million tons, compared with all other hay production at 59.5 million tons down from 61.9 million the previous year.

As a result of the drought, prices were strong during the 1983 summer. The farm price of all hay averaged $76 a ton during May–October 1983, compared with $68.76 a year earlier, and the average farm price in mid-January was $80 a ton—almost $10 above a year earlier. A total of 89.6 million roughage-consuming animal units (RCAU's) were on hand in 1983/84, compared with 90.4 million in 1982/83. Consequently, the per unit supply was down only 2 percent, from 1.96 tons in 1982/83 to 1.92 in 1983/84. Heavier feeding requirements forced by last summer's drought and January 1974's exceptionally cold temperatures, and the lowest carryover stocks in 19 years coupled with the lowest supply since 1977, were expected to assure record high hay prices for spring 1984. But much depended on the weather and the extent to which early pasturing could replace hay feeding.

Silage production from corn declined by 16 percent during 1983 and sorghum silage dropped by 9.6 percent, compared to a year earlier.

Salient Statistics of All Hay in the United States

Year Beginning May	Acres Harvested 1,000 Acres	Yield Per Acre Tons	Production	Carryover May 1	Disappearance	Farm Disposition: Kept on Farms	Farm Disposition: Sold	Supply Per Animal Unit	Disappearance Per Animal Unit	Animal Units Fed[2] Millions	Farm Price[3] $ Per Ton	Farm Produc. Value Million $	Alfalfa Seed (certified)	Timothy Seed	Red Clover Seed
			Million Tons					In Tons					Retail Price Paid by Farmers April 15 — Dollars Per Cwt.		
1971–2	61,355	2.10	129.1	22.2	125.8	104.1	25.1	1.66	1.38	91.1	28.10	3,335	64.20	22.70	57.70
1972–3	59,680	2.15	128.6	25.5	129.8	102.8	25.8	1.65	1.39	93.2	31.30	3,730	26.50	26.40	52.80
1973–4	61,828	2.17	134.2	24.3	133.0	107.0	27.2	1.59	1.34	99.5	41.60	5,004	83.20	46.10	73.30
1974–5	60,195	2.10	126.4	25.4	133.3	100.9	25.5	1.46	1.28	103.8	50.90	5,791	167.00	65.00	114.00
1975–6	61,353	2.16	132.4	18.5	125.4	105.6	26.6	1.54	1.28	98.2	52.20	6,458	140.00	51.00	106.00
1976–7	60,377	1.99	120.1	25.5	126.1	94.7	25.5	1.54	1.33	94.8	60.20	6,815	116.00	37.00	90.00
1977–8	60,988	2.17	132.2	19.5	127.5	105.1	27.1	1.69	1.42	89.5	53.70	6,826	177.00	60.00	108.00
1978–9	62,113	2.32	143.8	24.2	137.9	115.5	28.3	1.95	1.60	36.0	49.80	6,664	194.00	124.00	128.00
1979–0	61,666	2.40	147.8	30.1	144.6	118.8	29.0	2.03	1.65	87.5	59.50	7,363	215.00	98.00	115.00
1980–1	59,362	2.21	131.1	33.3	138.9	103.6	27.4	1.83	1.55	89.9	71.00	8,104	213.00	80.00	110.00
1981–2	60,192	2.38	143.2	25.4	143.4			1.84	1.56	91.8	67.10	9,218	218.00	98.20	117.00
1982–3[1]	60,679	2.51	152.5	25.2	148.6			1.96	1.64	90.4	68.80	10,049	202.00	62.00	126.00
1983–4[1]	60,461	2.36	143.3	29.0				1.89		90.6	77.50	11,106	208.00	69.20	160.00
1984–5															

[1] Preliminary. [2] Roughage-consuming animal units fed annually. [3] Price of hay sold baled, for year beginning July. *Source: Economic Research Service, U.S.D.A.*

T.275

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Production of All Hay in the United States by Important States In Millions of Tons

Year	Calif.	Idaho	Ill.	Iowa	Mich.	Minn.	Mo.	No. Dak.	Nebr.	N.Y.	Ohio	Pa.	So. Dak.	Wis.	Texas
1971	7.9	3.8	3.2	6.7	2.7	8.2	5.4	4.9	6.9	5.4	3.2	4.4	5.7	11.1	4.1
1972	8.2	3.7	3.4	7.0	3.1	8.2	5.5	5.1	7.1	4.5	3.1	3.8	7.3	10.2	3.9
1973	7.9	4.1	3.3	7.3	3.4	8.0	5.9	4.2	7.5	5.2	3.3	4.3	5.6	10.6	5.8
1974	7.7	4.4	3.2	6.5	3.0	7.5	5.4	4.7	6.3	5.3	3.0	4.2	5.2	10.6	5.1
1975	7.6	4.4	3.5	6.9	3.3	8.0	5.6	5.3	6.5	5.1	3.6	4.3	5.7	10.6	5.2
1976	7.6	4.2	3.5	6.7	3.1	5.8	4.9	4.0	6.0	5.4	3.6	4.1	2.8	8.1	5.4
1977	7.7	4.5	3.7	7.4	2.9	8.1	5.7	3.2	7.5	4.6	3.6	3.9	6.3	12.0	4.7
1978	7.0	4.7	3.6	8.5	3.9	8.8	6.0	6.3	7.5	5.3	3.9	4.3	8.3	11.6	5.4
1979	7.3	4.1	3.8	8.7	3.8	8.9	6.2	5.7	7.6	5.5	3.6	4.3	7.6	12.6	7.1
1980	7.7	4.4	3.6	8.0	3.8	7.1	4.5	2.5	7.1	5.8	3.6	4.2	5.4	12.5	5.5
1981	7.9	4.5	3.5	8.2	3.9	8.2	6.8	4.8	7.0	5.3	3.5	4.5	5.8	11.1	7.0
1982	7.7	4.4	3.6	8.3	4.4	8.3	6.5	5.6	7.9	5.3	3.6	4.8	8.6	13.2	6.7
1983[1]	7.4	4.9	2.7	6.1	4.4	8.3	5.7	5.1	8.0	5.3	3.1	4.6	7.8	12.4	7.5
1984															

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.277

U.S. Types of Hay Production & Farm Stocks In Millions of Short Tons

	Production					Farm Stocks	
Year	Alfalfa & Mixtures	All Other	All Hay	Corn for Silage[1]	Sorghum[1] Silage	Jan. 1	May 1
1971	77.2	52.0	129.1	109.3	11.0	87.7	22.2
1972	78.0	50.6	128.6	109.3	9.9	89.4	25.5
1973	79.1	55.6	134.2	114.3	9.5	88.8	24.3
1974	74.7	52.5	126.4	115.7	7.3	93.2	25.4
1975	78.0	54.2	132.4	116.1	7.5	84.7	18.5
1976	69.8	50.2	120.1	118.4	7.3	86.2	25.5
1977	80.4	50.9	132.2	117.7	9.2	77.4	19.5
1978	87.3	56.5	143.8	118.1	7.9	92.1	24.2
1979	88.3	59.5	147.8	114.9	9.0	99.1	30.1
1980	79.9	51.1	131.0	111.0	7.0	108.2	33.3
1981	83.8	59.4	143.2	115.5	9.3	99.7	25.2
1982	90.7	61.9	152.5	112.6	7.3	98.0	29.0
1983[2]	83.5	59.5	143.0	95.0	6.6	96.8	26.4
1984[2]						82.3	

[1] Not included in all tame hay. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.276

Average Price Received by Farmers for All Hay (Baled) on the 15th of Month In Dollars Per Ton

Crop Year	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Average[1]
1971–2	25.60	24.60	24.10	24.30	24.50	24.90	25.30	26.10	29.20	29.70	29.00	28.00	28.00
1972–3	31.30	30.90	28.50	29.30	29.80	30.30	31.00	33.00	34.60	35.40	35.40	33.90	31.30
1973–4	37.50	35.20	36.30	39.00	43.10	46.20	46.80	46.00	47.10	47.10	45.40	44.40	41.60
1974–5	54.00	47.70	48.20	51.10	51.90	51.50	50.30	50.70	50.10	49.30	49.70	52.40	50.90
1975–6	56.30	53.60	51.20	51.00	50.80	50.30	50.20	51.60	52.70	54.30	54.10	54.10	52.10
1976–7	64.10	59.60	59.00	58.70	60.80	60.10	59.00	59.00	60.90	62.70	63.90	63.20	60.20
1977–8	68.10	61.30	56.80	52.50	50.00	48.20	48.40	49.50	50.50	51.80	51.40	51.40	53.70
1978–9	55.30	51.20	49.20	49.00	47.80	47.10	46.40	47.30	48.90	50.70	50.20	49.90	49.80
1979–0	65.60	58.00	56.00	57.50	59.00	60.80	58.90	60.10	59.10	60.00	57.40	60.10	59.50
1980–1	69.30	65.10	67.00	67.20	71.90	77.20	75.00	74.80	72.80	72.50	69.80	68.20	71.00
1981–2	75.30	66.90	64.00	63.90	62.70	64.80	65.40	65.70	67.90	69.90	69.50	73.30	67.10
1982–3	76.80	68.60	65.30	63.90	65.90	66.30	68.20	68.10	70.50	73.50	70.10	73.70	68.80
1983–4[2]	83.00	75.90	72.00	72.20	74.20	78.50	76.40	77.90	80.00	81.20	80.50		
1984–5													

[1] Weighted average by sales. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.278

Heating Oil

Heating oil is a light fuel oil that has been distilled off during the petroleum refining process. The yield of distillate fuel per barrel of petroleum averages 20 percent. Distillate fuel oil includes products known as No. 1 and No. 2 heating oils, diesel fuels, and No. 4 fuel oil. Distillate fuels are used in the generation of electricity and steam, for space heating, and on- and off-highway diesel engine fuel (including railroad engine fuel). Distillate fuels are also used in the production of glass and ceramics. Compared with most other petroleum products, distillate fuel oil consumption is most highly correlated with weather data. It exhibits a pronounced annual peak in January or February. About half of the distillate fuel oil is used as diesel fuel in the transportation sector, a demand that has a subtle peak in the summer. This minor seasonal trend is overwhelmed by the use of distillate fuel oil for heating in the winter months, and is reflected by the strong correlation between heating degree-days and consumption of this fuel.

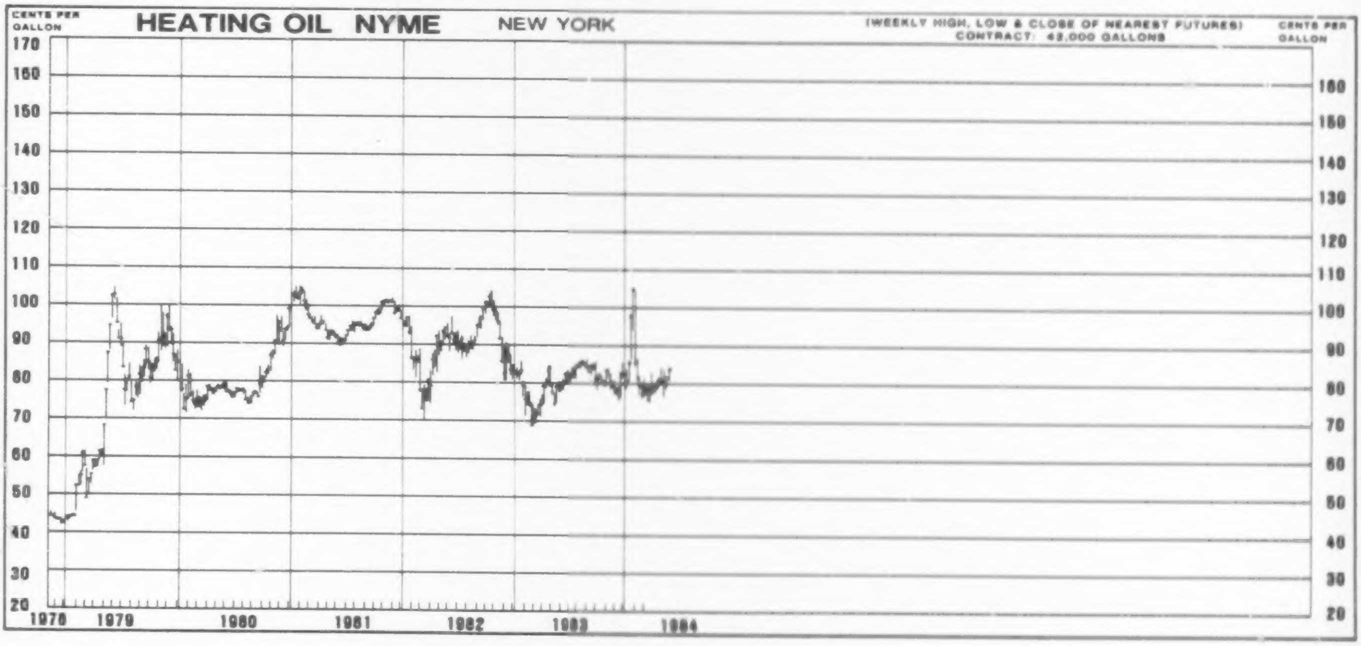
The average amount of distillate fuel oil supplied during 1983 was 0.4 percent above the average in 1982. It is possible that economic recovery and the resulting increased purchasing power raised consumers' purchases of heating oil and of other products during 1983. The demand for distillate fuel for residential heating was increased to some extent by severely cold temperatures during the 1983 winter. Because of the high prices for petroleum products that prevailed in recent years, residential use of distillate fuel oil had fallen steadily since the late 1970's. The average selling price of heating oil to residential customers increased from 49.4 cents per gallon in 1978 to 118.6 cents in 1982 before the total production of distillate fuel oil bottomed in the beginning of the second quarter of 1983. Available data indicate a seasonal relationship between supplies and production of heating oil: since 1982, product supplied has moved above total production from the end of the calendar year to the summer months.

Total production of distillate fuel oil in 1983 averaged 2.5 million barrels per day compared with the 1982 average of 2.6 million. Total product supplied in 1983 amounted to 2.7 million barrels per day, nearly even with distillate fuel product supplied in 1982. Withdrawal of distillate fuel from stock averaged 124,000 barrels per day in 1983, sharply above the 35,000 barrels recorded in 1982. Stocks of distillate fuel had peaked at approximately 160 to 170 million barrels at the beginning of 1983, and then had dipped to a little above 100 million barrels with the onset of the summer. By the end of 1983, the demand for distillate fuel for residential heating purposes had evidently been satisfied by anticipatory purchases, and stocks of distillates reached nearly 160 million barrels before entering a seasonal downtrend throughout the first quarter of 1984.

Preliminary figures published by the Energy Information Administration indicated that the average production of distillates in the first quarter of 1984 totaled 2.6 million barrels per day compared with 2.1 million in the beginning quarter of the previous year. First-quarter 1984 distillate fuel product supplied averaged 3.1 million barrels per day, up from 2.8 million supplied in first-quarter 1983. Withdrawal of distillate fuel from stocks in the first quarter of 1984 averaged 285,000 barrels per day, compared with 743,000 barrels in first-quarter 1983.

Futures Markets

Heating oil futures are traded on the New York Mercantile Exchange (NYMEX). Gasoil (heating oil) futures are traded on the International Petroleum Exchange (IPE) in London. The Chicago Board of Trade listed a heating oil futures contract in April 1983.



High, Low & Closing Prices of January Heating Oil Futures[1] in N.Y. In Cents per Gallon

Year of Delivery		Year Prior to Delivery[2]												Life of Delivery Range
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[2]	
1980	High	—	—	69.50	70.20	102.50	106.50	91.00	88.00	94.00	95.30	102.75	99.75	106.50
	Low	—	—	59.25	69.50	90.00	91.50	74.75	78.00	83.20	83.00	92.75	82.75	59.25
	Close	—	—	69.50	70.00	102.50	92.25	80.50	85.50	89.00	95.30	97.00	82.75	—
1981	High	—	—	—	94.00	93.25	91.00	86.50	82.00	87.50	90.25	99.00	97.25	99.00
	Low	—	—	—	88.00	90.25	85.90	81.50	78.45	79.00	83.15	88.50	89.25	78.45
	Close	—	—	—	92.50	91.00	86.60	81.55	81.12	84.55	89.50	95.62	96.90	—
1982	High	—	114.00	113.10	110.70	103.40	101.10	103.75	103.05	99.35	102.35	102.85	101.75	114.00
	Low	—	113.75	109.50	101.00	100.10	97.00	99.35	98.10	96.70	99.00	101.50	96.95	96.70
	Close	—	114.50	109.50	102.00	100.95	99.90	102.35	98.19	98.89	102.06	101.78	97.10	—
1983	High	—	—	85.00	95.75	100.40	98.75	93.60	96.65	101.95	104.20	99.20	90.60	104.20
	Low	—	—	82.00	85.50	94.00	90.61	89.25	90.70	95.55	97.10	84.20	79.81	79.81
	Close	—	—	85.00	94.40	97.00	91.08	90.80	96.30	99.79	98.29	86.52	82.81	—
1984	High	—	—	75.25	84.25	83.75	87.00	88.90	90.15	87.55	84.15	84.10	85.55	90.15
	Low	—	—	68.70	78.50	79.25	81.80	85.25	86.30	82.00	80.20	77.10	75.80	68.70
	Close	—	—	74.60	82.49	81.80	86.20	88.90	86.52	82.50	82.16	77.44	84.24	—
1985	High	—	—	83.75	84.40									
	Low	—	—	83.15	82.30									
	Close	—	—	83.75	83.00									

[1] No. 2 heating oil. [2] Contract expires the last business day of the previous calendar month quoted *Source: N.Y. Mercantile Exchange* T.281

Month End Open Interest of Heating Oil[1] Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	FUTURES TRADING BEGAN NOV. 14, 1978										12	55
1979	327	200	118	299	370	485	1,165	1,280	1,894	1,952	2,221	1,973
1980	2,186	2,590	2,032	2,324	2,622	2,948	3,286	5,889	8,365	11,884	13,519	11,556
1981	11,792	12,040	13,256	14,893	17,919	16,822	19,220	28,102	36,996	35,519	33,517	31,585
1982	22,042	15,655	21,121	18,502	19,248	21,277	21,676	20,815	22,500	29,614	24,486	21,848
1983	19,642	23,307	18,980	22,868	27,797	29,320	34,414	32,276	37,856	36,164	36,230	30,916
1984	32,596	18,900	17,738	16,617								
1985												

[1] No. 2 heating oil. *Source: N.Y. Mercantile Exchange* T.279

Volume of Trading of Heating Oil Futures[1] in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	FUTURES TRADING BEGAN NOV. 14, 1978										37	79	116
1979	365	515	182	369	502	1,377	2,156	2,205	2,847	5,895	9,371	8,010	33,804
1980	8,512	8,427	5,146	4,798	3,421	5,923	6,074	11,564	27,430	40,525	53,098	63,366	238,284
1981	67,368	58,514	55,299	65,350	58,933	76,580	86,394	100,102	99,790	121,455	78,972	126,749	995,532
1982	165,079	148,794	176,373	146,821	98,440	135,181	107,102	118,496	120,830	167,439	177,832	183,139	1,745,526
1983	153,864	112,649	137,237	121,300	163,923	149,138	138,706	140,671	187,283	169,271	200,400	193,877	1,868,322
1984	254,788	209,802	144,326	144,041									
1985													

[1] No. 2 heating oil. *Source: N.Y. Mercantile Exchange* T.280

HEATING OIL

U.S. Gross Input to Crude Oil Distillation Units In Millions of 42-Gallon Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	336.9	304.8	335.9	318.4	324.0	326.2	355.5	341.7	330.3	336.6	330.6	346.7	3,968
1971	344.9	312.3	345.1	336.2	332.8	344.5	355.0	352.4	334.0	345.5	333.6	351.5	4,088
1972	353.0	329.3	351.7	335.5	355.8	355.2	368.4	369.4	363.4	368.0	355.5	375.5	4,281
1973	377.9	341.2	378.2	366.2	380.7	385.9	395.2	391.7	376.8	395.5	371.2	376.6	4,537
1974	373.2	326.5	368.7	371.6	400.4	398.8	414.1	409.1	380.0	398.3	386.0	404.9	4,632
1975	395.8	353.9	384.3	368.3	384.7	385.6	414.9	416.9	401.5	397.3	394.6	411.4	4,709
1976	403.6	388.1	412.2	396.4	413.4	427.7	446.1	446.3	425.3	428.0	437.3	457.0	5,081
1977	453.4	425.5	456.2	438.3	463.1	457.9	471.1	465.9	457.8	466.3	449.2	463.5	5,468
1978	450.1	401.4	448.3	426.6	472.4	451.5	470.5	483.8	462.2	475.9	470.6	487.6	5,501
1979	467.7	409.3	449.6	445.2	457.1	453.6	477.9	474.0	447.1	457.9	447.0	472.4	5,459
1980	453.6	421.7	433.8	413.5	423.4	421.7	422.5	412.3	408.2	402.9	403.4	432.4	5,049
1981	418.3	369.6	391.4	368.5	389.3	381.9	389.6	409.2	382.2	382.9	377.5	393.8	4,654
1982	371.5	325.1	361.4	353.1	379.1	388.1	399.6	378.0	376.7	376.8	364.4	368.8	4,443
1983[1]	354.1	308.1	344.7	349.9	373.9	378.2	390.5	382.0	373.7	371.2	368.5		
1984													

[1] Preliminary. *Source: Bureau of Mines*

T.282

Average Price of Distillate (Middle) No. 2 Fuel Oil[1] Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	113.9	124.1	129.1	130.1	133.8	137.4	141.8	143.3	145.6	147.7	157.3	171.7	139.7
1974	194.8	234.1	251.8	257.9	269.2	279.7	288.9	294.8	298.8	297.9	296.0	300.1	272.0
1975	299.1	297.5	294.6	294.9	296.1	301.3	308.3	312.9	318.2	322.9	330.8	336.3	309.4
1976	336.7	339.3	335.3	331.8	328.5	329.2	332.2	336.2	338.9	341.2	344.3	349.8	337.0
1977	359.2	369.6	378.0	384.4	387.5	387.5	388.6	389.1	389.3	389.6	392.4	394.4	384.1
1978	396.7	398.6	394.8	393.3	393.3	393.3	393.2	393.6	394.0	400.0	407.6	418.0	398.0
1979	425.7	432.6	451.9	477.9	504.8	542.3	593.1	632.8	680.6	709.9	715.3	719.9	573.9
1980	739.3	793.5	837.7	858.9	964.8	860.9	870.2	875.6	873.2	868.4	873.4	891.1	850.6
1981	935.4	1,000.3	1,082.8	1,105.4	1,092.5	1,092.2	1,079.8	1,076.7	1,067.8	1,053.4	1,047.5	1,060.6	1,058.1
1982	1,067.8	1,058.2	1,029.3	953.6	928.7	974.6	1,024.0	1,022.2	1,001.7	997.7	1,040.6	1,053.6	1,012.7
1983	985.3	927.4	874.2	813.4	838.1	879.4	876.3	883.0	893.5	911.4	901.0	891.3	889.5
1984	870.6												
1985													

[1] Barge lots, f.o.b. refinery or terminal, excluding all fees & taxes. *Source: Bureau of Labor Statistics* (0573)

T.283

Average Wholesale Price of Kerosene (Light Distillate)—No. 1 Fuel Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	112.1	120.4	121.2	123.4	122.9	126.9	128.6	129.4	130.0	135.6	135.9	145.9	128.0
1974	154.3	184.8	198.7	209.4	217.6	233.2	241.7	250.2	256.8	254.7	261.4	257.9	226.7
1975	253.7	267.2	274.9	273.6	280.6	284.6	283.7	299.1	297.9	299.4	304.2	307.8	285.6
1976	310.5	316.6	313.9	311.2	306.7	303.8	305.4	309.2	311.5	316.0	320.2	323.2	312.3
1977	326.1	339.7	346.9	352.4	355.5	358.0	360.9	363.2	364.0	375.1	379.4	381.3	358.5
1978	383.0	388.2	388.4	387.9	390.7	391.4	393.1	394.4	395.8	397.6	398.4	403.0	392.7
1979	407.5	412.7	419.1	433.0	465.5	504.1	533.4	588.4	633.4	675.2	696.6	706.3	539.6
1980	733.9	776.9	834.6	862.5	870.5	878.4	892.7	903.1	903.2	896.3	896.8	911.4	863.4
1981	932.1	972.0	1,041.0	1,080.9	1,084.1	1,078.9	1,067.5	1,052.6	1,044.6	1,043.2	1,042.7	1,037.9	1,039.8
1982	1,044.3	1,034.3	1,027.9	1,009.1	975.9	974.2	984.4	983.0	976.3	969.7	985.9	992.1	996.4
1983	975.2	959.4	939.2	908.4	897.1	894.3	882.8	880.7	880.4	888.3	884.5	880.4	905.8
1984	871.2												
1985													

Source: Bureau of Labor Statistics (0572)

T.284

Stocks of Distillate Fuel in the U.S., First of the Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Residual Fuel — Oil Stocks — Jan. 1	Residual Fuel — Oil Stocks — July 1
1970	171.7	130.7	111.5	101.0	102.1	115.8	137.5	163.5	188.2	205.7	216.4	218.1	58.4	46.0
1971	195.3	158.7	128.7	112.9	113.7	125.8	145.8	172.4	197.0	210.1	223.0	214.8	54.0	58.7
1972	190.6	160.1	122.2	101.8	98.3	112.9	128.8	155.6	174.7	190.3	195.6	182.6	59.7	56.1
1973	154.3	131.0	113.3	111.3	114.7	119.1	137.9	160.9	177.3	190.2	203.0	200.2	55.2	51.8
1974	196.5	181.2	149.2	128.9	125.6	141.8	160.7	182.5	198.7	208.3	209.9	212.9	53.5	57.9
1975	200.1	199.8	176.7	161.1	146.3	152.1	163.3	181.5	197.4	220.8	226.2	235.8	59.7	69.7
1976	208.8	165.5	150.5	138.3	137.3	147.1	165.1	190.9	218.0	232.3	235.6	223.7	74.1	64.3
1977	186.0	143.0	133.3	141.9	148.3	162.2	178.9	204.9	229.8	252.8	267.4	270.6	72.3	71.9
1978	250.3	213.3	165.7	137.9	136.2	144.6	157.3	180.5	200.2	220.7	233.1	233.2	90.0	72.0
1979	216.5	175.8	127.3	112.8	115.1	123.1	141.4	171.2	195.4	220.4	231.1	236.7	90.2	79.8
1980	228.7	212.4	191.7	177.9	177.2	183.4	196.6	213.8	226.3	232.4	225.7	222.4	95.6	87.8
1981	205.4	179.4	172.6	164.4	164.6	171.8	179.9	186.3	200.2	207.3	201.2	200.1	91.5	69.4
1982	191.5	164.4	147.4	126.3	108.0	113.6	123.7	148.2	158.7	161.2	170.1	185.6	78.0	60.7
1983[1]	178.6	168.2	147.7	118.7	103.2	109.2	113.8	131.0	143.5	154.7	163.3	161.3	66.2	50.1
1984[1]													55.0	

[1] Preliminary. Source: *Bureau of Mines* T.285

U.S. Production of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	84.8	85.9	86.6	79.7	84.9	86.6	91.8	92.4	88.4	92.9	95.4	100.9	1,070.2
1977	104.5	103.5	98.4	89.8	97.1	95.7	99.1	101.4	99.3	104.2	100.2	103.0	1,196.3
1978	95.1	82.7	93.5	88.8	100.8	93.3	96.8	102.2	95.6	102.3	101.0	104.2	1,156.1
1979	94.3	80.9	93.6	88.4	95.0	94.6	102.5	103.0	100.6	100.8	97.2	99.9	1,150.8
1980	93.4	80.2	79.3	73.8	76.7	79.4	83.4	76.3	80.6	80.3	81.1	89.6	974.1
1981	92.6	78.6	77.0	72.5	76.1	75.0	74.2	82.3	78.3	77.0	81.5	88.6	953.8
1982	80.3	67.9	70.9	70.7	81.2	81.9	84.8	77.7	79.7	88.0	85.8	82.3	951.3
1983[1]	71.7	59.8	61.7	65.1	75.8	76.4	80.6	81.0	81.7	83.1	80.4		
1984													

[1] Preliminary. Source: *Dept. of Energy* T.286

U.S. Imports of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	5.1	6.3	4.8	2.9	3.0	4.5	3.9	4.1	4.5	4.5	4.0	6.1	53.5
1977	10.8	18.6	17.0	4.6	3.1	4.0	5.9	5.0	5.1	4.6	5.6	7.0	91.3
1978	6.1	5.9	6.0	3.0	3.9	4.4	4.6	4.4	4.9	5.5	6.7	7.9	63.3
1979	7.0	5.5	5.5	4.5	5.8	5.4	7.0	6.7	3.8	6.6	5.8	7.1	70.5
1980	5.5	6.9	6.0	4.6	3.9	3.2	3.6	2.4	3.0	3.6	4.0	5.2	51.9
1981	8.5	9.1	4.6	3.5	5.5	6.7	5.5	5.4	3.9	3.7	3.7	2.9	63.1
1982	3.0	3.7	1.5	1.8	2.3	3.1	3.9	2.5	1.8	2.8	4.4	3.4	34.0
1983[1]	1.8	1.6	1.3	2.2	4.4	5.3	8.0	9.3	7.6	7.9	5.7		
1984													

[1] Preliminary. Source: *Dept. of Energy* T.287

U.S. Domestic Consumption of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	133.2	107.2	103.5	83.6	78.1	73.1	69.9	69.4	78.6	94.0	111.4	144.7	1,146.7
1977	158.2	131.8	106.7	88.1	86.2	83.1	79.1	81.6	81.4	94.1	102.6	130.4	1,223.3
1978	138.2	135.8	127.3	93.3	96.2	85.1	78.2	86.8	79.9	95.4	107.5	128.8	1,252.6
1979	142.0	134.7	113.6	90.5	92.9	81.2	79.4	85.6	79.4	96.7	97.4	114.9	1,208.5
1980	115.1	107.6	98.5	79.0	74.5	69.5	69.7	66.2	77.6	90.5	88.5	112.1	1,049.0
1981	127.4	94.5	90.0	76.0	74.7	73.9	73.7	74.0	75.4	86.9	86.4	99.6	1,032.5
1982	108.0	86.4	91.3	89.3	75.8	73.5	63.8	68.8	75.2	80.0	74.2	88.5	974.9
1983[1]	85.6	79.3	89.9	81.4	72.6	75.8	69.7	76.5	77.0	80.8	86.4		
1984													

[1] Preliminary. Source: *Dept. of Energy* T.288

Hides and Leather

U.S. production of cattlehides, derived from total commercial slaughter, increased an estimated 1 percent to 36.3 million in 1983 from 35.8 million in 1982. Cattle slaughter had dropped to a low of 33.7 million head in 1979 from more than 43 million in 1976, and slaughter had increased only gradually since 1979. Increases since then have been modest compared with previous cycles, influenced by persistently high interest rates, and it is considered unlikely that slaughter levels in this cycle will reach the peak of 42.7 million reached in 1976.

U.S. cattlehide exports in 1983 totaled 22.3 million pieces, down 4 percent from 23.2 million in 1982. Exports represented 61 percent of commercial slaughter. This proportion exceeded 70 percent in 1979 when low slaughter levels and exports of 23.7 million hides coincided to push up cattlehide prices to historically high levels. In 1983, Japan, the Republic of Korea, Mexico, Italy, and Taiwan were the largest importers of U.S. raw and cured cattlehides. Japan and Korea accounted for about 50 percent of the total, and Taiwan took almost 10 percent, a sharp increase over 1982. Exports to China, which imports a large and increasing share of U.S. cattlehide exports in the form of partially processed "wet-blue" leather, declined by 7 percent in 1983 from 1982. As of April 19, 1984, cattlehide exports totaled 7.4 million pieces vs. 7.0 million on the year earlier date.

Heavy Native Cow prices, f.o.b. River points, as quoted in the Journal of Commerce, in 1983 ranged between a high of about 61 cents per pound and a low of 37 cents, ending the year around 54½ cents per pound. Raw hides and skins are the major components of tanners' direct costs, and can be as high as 70 percent of total costs.

The footwear industry consumed about 60 percent of all leather produced domestically in 1983. Although domestic footwear production was estimated to have declined again in 1983, the proportion of footwear made with leather uppers increased to 56 percent from 54 percent in 1982. However, consumption of sole leather by the footwear industry declined about 10 percent. Consumption declines of leather were also registered by the handbag, luggage, and personal leather goods industries.

Domestic non-rubber footwear production in 1983 dropped about 11 million pairs to an estimated 320 million pairs. This decline continued a downward trend begun in 1968, when production exceeded 640 million pairs. Production declines were narrowed as the year progressed and the economy emerged from the recession. Inventories were rebuilt in 1983 following substantial liquidation in late 1982. In 1983, slipper production declined about 19 percent, and women's footwear, about 7 percent. In contrast to the 3-percent domestic production decline, import growth in 1983 rose about 17 percent to 561 million pairs from 470 million in 1982. Domestic consumption of non-rubber footwear in 1983 was estimated at 869 million pairs.

In 1983, men's footwear accounted for 23 percent of the quantity and 41 percent of the value of product shipments of all nonrubber footwear. Ninety-one percent of men's footwear was made of leather. Shipments of men's footwear in 1983 increased about 4 percent to 73 million pairs from 70 million pairs in 1982. Production of men's footwear in 1983 increased about 8 percent to 74 million pairs. Import penetration in the men's sector was 56 percent in volume in 1983 vs. 58 percent in 1982. In 1983, domestic production of women's footwear fell about 5 percent to 118 million and shipments were off about 7 percent to an estimated 116 million pairs. About 56 percent of women's footwear was made of leather.

Leather shipments by U.S. tanners in 1983 increased about 5 percent to 18.9 million equivalent cattlehide units from 18.0 million in 1982. Included in these totals are leathers produced from hides and skins of cattle, calf, kips, goats, sheep, lambs, cabretta, and horses. Cattlehide leather represented 15.5 million units, or 82 percent of the total in 1981.

U.S. exports of semi-processed wet-blue leather increased substantially in 1983. Wet-blue has become a major item in the world leather trade because of its lower shipping costs and quality advantages compared with raw hides. In 1983, U.S. leather imports declined about 22 percent.

Outlook for 1984

U.S. leather shipments are expected to decline 2 percent to about 18.5 million cattlehides in 1984 as the domestic production of leather products is expected to decline. Cattlehide exports should increase, but a relatively strong U.S. dollar should continue to retard growth in leather exports, while leather imports at very competitive prices are expected to account for an even higher proportion of the domestic market for leather.

World Production of Bovine Hides and Skins In Thousands of Units of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Colombia	France	— Germany —		Mexico	Italy	Poland	South Africa	Turkey	New Zealand	Un. Kingdom	United States	USSR
							East	West									
1970–4*	246.7	129.3	331.4	89.7	64.9	143.6	44.0	145.8	80.0	102.5	56.5	67.7	46.0		94.7	1,012	675.2
1975	277.4	185.5	338.0	111.7	67.2	163.3	47.3	155.5	107.7	91.4	76.1	66.9	57.0		127.4	1,199	695.3
1976	320.1	208.0	339.0	117.6	76.5	174.0	48.2	167.1	108.0	93.6	86.1	55.3	50.1		111.6	1,223	725.6
1977	339.2	219.5	375.0	115.3	73.0	162.2	49.1	161.1	114.6	95.5	80.4	58.8	52.1		102.9	1,209	735.0
1978	370.8	202.1	336.0	106.1	78.2	162.8	49.7	164.5	124.0	91.9	75.9	65.1	53.4		99.0	1,134	741.0
1979[1]	358	158	281	89		EC-10 (682)						64		44		964	867
1980	322	149	280	91		EC-10 (698)						60		40		964	867
1981	333	142	291	96		EC-10 (683)						52		44		987	890
1982[1]	293	168	308	98		EC-10 (667)						53		46		1,020	890
1983[1]	259	140	322	96		EC-10 (678)						53		48		1,038	950

* Average [1] Preliminary *Source: Foreign Agricultural Service, U.S.D.A.* T 289

Salient Statistics of Hides & Leather in the United States

Year	New Supply of Cattle Hides					Wholesale Prices—F.O.B. Pts.		Production		Upper & Lining Leather Exports	Wholesale Leather Prices		Footwear	
	Domestic Slaughter													
	Federally Inspected	Uninspected[4]	Total Production	Net Exports	Total New Supply	Calf[2] Skins	Hides[3] Heavy Native Chicago	All U.S. Tanning	Cattle-Hide		Sole[5]	Upper[6]	Production[7]	Export
	Thousands of Equivalent Hides					¢ Lb.		In Ths. Equiv. Hides		Ths. Sq. Ft.	1967 = 100		Mil. Pairs	
1971	31,419	4,861	36,280	15,694	20,586	29.4	14.4	25,267	20,520	82,944	114.4	120.1	536	2.1
1972	32,267	4,213	36,480	17,705	18,775	56.3	29.7	24,661	20,084	117,556	157.5	125.7	527	2.3
1973	30,521	4,179	34,700	16,177	22,728	62.2	33.7	21,062	17,768	120,104	184.6	134.3	490	3.6
1974	33,319	4,381	37,700	17,924	19,776	64.4	23.0	19,998	17,084	148,565	158.8	144.0	453	4.0
1975	36,904	4,896	41,800	20,329	21,471	35.0	23.5	21,894	18,830	184,104	151.1	151.8	413	4.3
1976	38,992	4,590	43,582	24,318	19,264	75.5	33.0	23,526	20,231	203,707	197.9	163.8	423	6.0
1977	38,717	3,139	41,856	23,569	18,287	91.4	36.2	21,528	18,512	206,276	206.1	171.8	418.1	5.4
1978	36,948	2,604	39,552	24,101	15,451	134.6	47.2	20,199	17,371	208,799	235.2	185.3	418.9	6.2
1979	31,504	2,173	33,678	23,063	10,615	168.7	72.5	18,170	15,041	187,665	329.6	192.9	398.9	7.6
1980	31,642	2,165	33,807	18,640	15,167	109.8	44.5	17,600	14,790	192,597	283.8	211.7	386.3	9.8
1981	32,819	2,134	34,953	18,701	16,252	N.A.	43.8	19,184	15,520	192,193	306.7	214.4	372.0	9.7
1982	33,907	1,936	35,843	22,553	13,290	N.A.	42.3	18,229	15,028	159,804	N.A.	215.8	342.4	7.7
1983[1]	34,830	1,832	36,662	21,205	15,457		49.9	18,610	15,423	5,809		222.6	347.0	6.5

[1] Preliminary. [2] Packer, heavy, 9½ to 15 pounds. [3] Cents per pound. [4] Includes farm slaughter; diseased & condemned animals & hides taken off fallen animals. [5] Bends, light, f.o.b. tannery. [6] Women's Leather Upper. [7] Other than rubber. *Sources: Tanners' Council of America; Bureau of Labor Statistics; Dept. of Commerce*

T.290

U.S. Exports of Upper & Lining Leather In Thousands of Square Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	8,746	7,872	9,254	11,311	12,618	10,873	8,154	10,353	9,919	10,184	6,459	9,563	120,104
1974	9,984	10,163	10,407	11,917	16,191	14,674	12,800	11,699	14,108	12,831	11,032	12,759	148,565
1975	14,748	12,427	13,574	14,624	16,735	18,473	13,341	16,979	14,714	17,131	16,737	12,909	184,104
1976	14,517	17,367	18,157	19,449	21,149	18,795	14,028	12,074	18,343	14,361	15,108	18,388	203,707
1977	18,630	19,272	23,315	18,338	16,714	16,205	18,612	12,276	16,838	12,807	14,980	18,240	206,276
1978	17,364	15,308	16,408	16,720	18,899	21,427	14,160	19,726	16,224	17,438	17,947	17,176	208,799
1979	13,854	16,014	18,833	16,480	15,664	18,526	13,153	15,265	14,457	13,895	16,089	15,433	187,665
1980	15,769	16,873	18,710	13,024	12,652	15,483	15,481	15,215	15,818	19,051	20,880	13,641	192,597
1981	19,633	14,418	19,717	17,678	18,016	18,692	13,921	10,918	15,393	12,682	19,464	11,660	192,193
1982	10,849	10,343	13,696	15,534	17,449	18,610	18,486	12,065	10,417	11,842	9,726	10,786	159,804
1983[1]	11,052	12,453	15,078	15,200	13,492	14,868	12,013	13,099	12,715	14,027	12,400	9,412	155,809
1984													

[1] Preliminary. *Source: Tanners' Council of America*

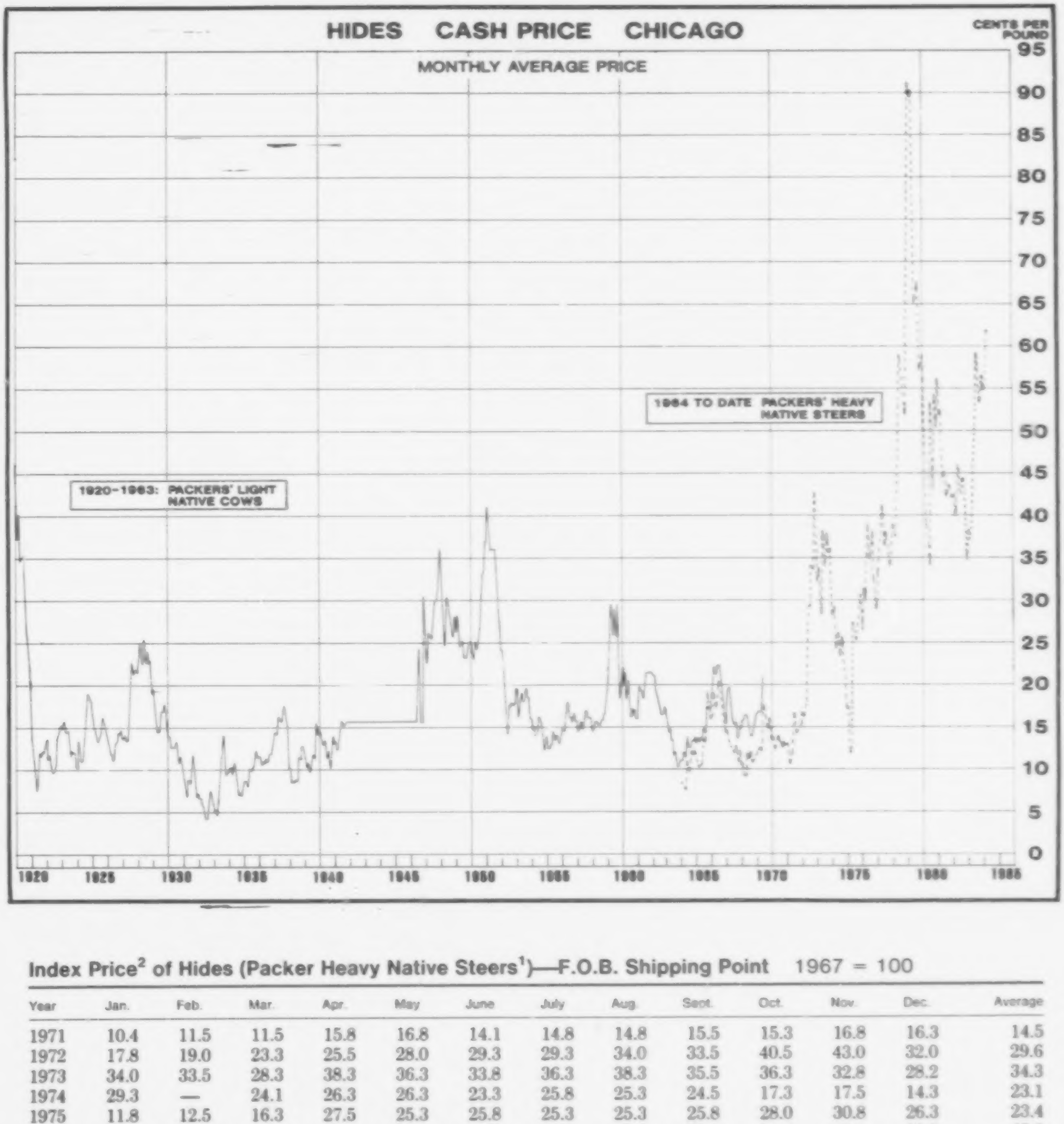
T.292

U.S. Production of All Footwear (Shoes, Sandals, Slippers, Athletic, Etc.) In Millions of Pairs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	44.8	44.9	50.3	46.8	44.1	46.7	37.6	46.3	45.7	45.1	40.7	42.9	535.8
1972	44.5	44.3	48.7	44.1	45.2	46.2	36.1	46.2	44.2	46.4	41.1	38.5	526.5
1973	42.9	41.9	46.8	41.9	41.7	41.7	32.1	43.7	39.2	45.2	38.5	34.2	490.0
1974	40.8	41.1	42.9	39.9	43.2	39.9	32.9	37.3	34.8	36.9	33.2	30.2	453.0
1975	32.7	31.2	31.6	32.8	32.7	34.1	32.2	36.2	37.7	42.4	34.6	35.0	413.1
1976	37.0	36.1	42.2	39.4	38.7	37.3	29.5	34.8	35.1	33.2	30.0	29.2	422.5
1977	34.8	34.5	37.6	34.3	35.5	36.9	26.9	37.5	35.6	36.4	35.9	33.2	418.1
1978	34.5	34.8	39.9	35.8	39.5	36.8	26.1	37.1	34.2	36.3	33.8	30.2	418.9
1979	37.3	34.9	38.7	33.4	37.3	31.9	25.4	33.9	31.1	35.0	31.3	28.7	398.9
1980	34.9	33.2	33.9	32.9	34.1	32.5	27.3	30.7	32.5	36.2	29.5	28.6	386.3
1981	31.8	31.0	34.8	33.3	32.3	30.6	27.4	31.1	33.4	35.6	31.1	28.0	372.0
1982	27.0	27.8	31.7	27.7	28.6	28.6	24.0	28.3	28.9	28.9	27.1	24.4	342.4
1983[1]	27.8	31.8	31.5	27.0	30.0	28.5	22.5	30.4	29.8	29.4			
1984													

[1] Preliminary. *Source: U.S. Department of Commerce*

T.295



Index Price[2] of Hides (Packer Heavy Native Steers[1])—F.O.B. Shipping Point 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	10.4	11.5	11.5	15.8	16.8	14.1	14.8	14.8	15.5	15.3	16.8	16.3	14.5
1972	17.8	19.0	23.3	25.5	28.0	29.3	29.3	34.0	33.5	40.5	43.0	32.0	29.6
1973	34.0	33.5	28.3	38.3	36.3	33.8	36.3	38.3	35.5	36.3	32.8	28.2	34.3
1974	29.3	—	24.1	26.3	26.3	23.3	25.8	25.3	24.5	17.3	17.5	14.3	23.1
1975	11.8	12.5	16.3	27.5	25.3	25.8	25.3	25.3	25.8	28.0	30.8	26.3	23.4
1976	31.5	29.8	30.0	34.9	39.0	34.8	36.3	37.3	38.3	31.8	29.0	32.3	33.8
1977	35.8	36.3	37.3	40.1	41.3	36.3	38.1	36.8	34.8	33.8	34.8	38.0	37.0
1978	38.8	37.8	37.3	41.3	41.8	45.8	47.8	53.0	59.0	57.3	54.8	51.8	47.2
1979[2]	506.4	548.4	766.9	750.1	760.2	696.3	653.0	594.6	549.2	568.9	498.5	480.1	614.4
1980	496.7	409.3	331.5	320.5	283.6	321.0	369.0[1]	448.0	361.4	412.9	455.9	420.6	385.9
1981	375.1	344.1	356.1	405.8	385.8	364.9	351.7	373.6	344.3	347.7	347.2	343.4	361.6
1982	353.6	346.0	325.8	339.3	353.5	342.1	342.1	349.7	343.5	336.4	324.7	312.9	339.1
1983	313.9	315.0	329.6	345.0	378.6	386.8	434.2	N.A.	447.5	N.A.	463.8	489.6	390.4
1984	479.0												

[1] Over 53 pounds [2] Data prior to 1979 are in cents per pound *Source: Bureau of Labor Statistics* (0411-0111.99) T.296

U.S. Imports and Exports of All Cattle Hides In Thousands of Hides

Year	Imports: Total	Imports: From Canada	U.S. Exports—By Country of Destination: Total	Canada	France	W. Germany	Japan	Mexico	Netherlands	Poland	Spain	Romania	South Korea	Czech.	Italy
1971	275	245	15,962	883	545	576	6,010	2,195	305	473	842	571	357	694	62
1972	292	283	17,578	893	753	585	7,246	1,776	299	545	758	1,201	411	852	178
1973	694	661	16,866	764	548	535	6,840	2,005	129	719	503	1,006	821	807	426
1974	520	484	18,428	790	327	396	6,642	2,500	153	639	554	1,777	1,252	638	250
1975	958	954	21,269	805	504	315	7,108	2,362	219	787	948	1,226	2,203	877	565
1976	962	958	25,270	1,057	816	518	9,356	1,708	326	389	957	1,651	3,270	678	1,561
1977	932	926	24,489	859	769	435	8,425	1,967	417	433	940	1,472	3,611	680	1,048
1978	704	694	24,791	1,093	555	379	8,797	1,938	211	349	1,019	1,942	3,720	586	1,284
1979	673	643	23,731	1,248	691	454	7,396	2,428	324	513	892	1,317	2,526	682	2,248
1980	880	859	19,512	1,046	238	206	7,476	1,972	164	522	112	1,046	2,653	318	690
1981	1,028	881	19,703	1,212	137	319	7,512	2,485	94	203	394	680	3,579	334	486
1982	658	592	23,175	1,041	478	671	6,469	1,882	280	790	643	939	4,572	415	1,395
1983[1]	665	570	21,281	1,235	332	343	6,413	1,296	174	303	246	1,318	4,635	489	823

[1] Preliminary. *Source: Tanners' Council of America*

T.297

Average Factory Price of Footwear in the United States In Dollars Per Pair

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	5.39	5.37	5.41	5.40	5.18	5.21	5.38	5.21	5.16	5.17	5.13	5.45	5.29
1972	5.45	5.48	5.54	5.67	5.48	5.52	5.75	5.59	5.55	5.41	5.39	6.00	5.56
1973	6.32	6.15	6.19	6.28	6.09	6.11	6.30	6.24	6.29	6.20	6.16	6.63	6.24
1974	6.84	6.67	6.81	6.76	6.91	6.86	6.99	6.90	7.20	7.25	7.31	7.63	6.99
1975	7.48	7.64	7.50	7.43	7.63	7.63	7.49	7.43	7.45	7.46	7.63	7.29	7.50
1976	8.00	7.87	8.07	8.16	8.23	8.23	8.32	8.34	8.63	8.21	8.75	8.73	8.28
1977	8.61	8.40	8.63	8.81	8.53	8.39	8.44	8.36	8.51	8.28	8.62	9.00	8.54
1978	8.50	8.39	8.76	9.35	9.51	9.37	9.41	8.66	9.40	9.37	9.61	10.31	9.20
1979	9.73	9.84	9.68	10.23	10.00	10.48	11.74	10.31	10.30	10.46	11.15	11.47	10.60
1980	11.67	11.83	11.81	12.27	12.16	11.37	11.40	11.94	11.08	11.25	11.45	11.41	11.63
1981	11.67	11.93	12.52	12.72	13.09	13.16	13.01	13.14	13.22	12.90	12.67	12.58	12.52
1982	12.96	12.32	12.49	12.74	12.76	13.30	14.13	13.34	13.12	13.10	13.56	14.08	13.14
1983[1]	12.23	13.02	12.51	12.86	13.48	12.88	12.26	13.43	13.35	14.26	13.95	14.78	13.23
1984													

[1] Preliminary. *Source: Tanners' Council of America*

T.298

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Hogs

Throughout 1983, a combination of lower hog prices and sharply increased feed costs acted to reduce hog producers' returns compared to a year earlier. Despite the deterioration of returns, however, the December 1983 inventory of all hogs and pigs totaled 55.8 million head, up 3 percent from a year earlier. The market hog inventory totaled 48.5 million, up 4 percent from the preceding year, but down 5 percent from two years earlier. The breeding herd was estimated at 7.35 million head, 1 percent below a year earlier and 6 percent under two years earlier.

The U.S. pig crop in June–November 1983 was estimated at 45.5 million head, 6 percent above the comparable period in 1982. The number of pigs per litter remained unchanged. Producers tended to reduce breeding herds, however, because of the mid-July drought and high feed prices due to sharply reduced 1983 corn acreage. In June 1983, producers indicated intentions to farrow 9 percent more sows during this period. However, September–November farrowings were only 2 percent above the year-earlier level. Although producers in the 10 quarterly reporting states had indicated intentions of having 8 percent more sows farrow during September–November, their actual sow farrowings reported during that period were unchanged from a year earlier.

On December 1, 1984, producers indicated intentions to have 5 percent fewer sows farrow during the December 1983–May 1984 period. Producers in the 10 quarterly reporting states indicated intentions to reduce sow farrowings by 8 percent in March–May. However, the USDA March 1984 pig crop report stated that hog producers in the 10 quarterly reporting states intended to farrow 11 percent less in March–May 1984 than farrowings in the comparable period in 1983. The same report indicated farrowing intentions for June–August 1984 at 2.10 million head, or 13 percent below the same period in 1983 and 5 percent less than in 1982. This would represent the lowest June–August farrowings since 1975. June–August 1984 actual farrowings were expected to fall short of intentions if the prices for corn and soybean meal continued generally steady throughout the spring.

The USDA estimated the inventory of all hogs and pigs as of March 1, 1984 at 39.5 million head in the 10 quarterly reporting states. The March 1, 1984 estimate was 5 percent below March 1983, 3 percent below March 1982, and the lowest March inventory since 1976. The March 1984 breeding inventory, at 5.35 million head, was 10 percent less than a year earlier, 4 percent below the March 1, 1982 figure,

World Hog Numbers in Specified Countries In Millions of Head

Year	Brazil	Denmark	France	W. Germany	Hungary	Italy	Japan	Mexico	Philippines	Poland	China[3]	Un. Kingdom	United States	USSR	World
1974	35.0	8.2	11.4	20.5	8.0	8.2	8.0	11.7	9.3	21.5	234.9	9.3	60.6	70.9	671.5
1975	43.5	8.1	12.0	20.2	8.3	8.8	7.7	12.1	6.6	21.7		7.9	54.7	72.3	
1976	36.0	7.6	11.5	19.8	7.0	8.9	7.5	12.0	6.5	21.6		7.7	49.3	57.9	364.1
1977	36.8	7.9	11.5	20.6	7.9	9.1	8.1	12.3	5.7	16.8		8.2	54.9	63.1	380.3
1978	37.6	8.2	11.5	21.4	7.9	9.4	8.8	12.6	6.9	20.6		7.7	56.5	70.5	402.6
1979	36.0	9.2	11.3	22.6	8.0	8.9	9.5	12.7	7.4	21.1		8.0	60.4	73.5	416.4
1980	36.5	9.5	11.4	22.4	8.4	8.8	10.0	12.8	7.9	21.0		7.8	67.4	73.9	431.3
1981	35.0	9.7	11.7	22.6	8.3	8.9	10.1	15.4	7.6	18.7	305.0	7.8	64.5	73.4	408.6
1982[1]	33.5	9.8	11.6	22.3	8.3	9.0	10.0	16.5	7.6	19.1		7.9	58.7	73.3	404.0
1983[2]	33.5	9.5	11.6	22.5	9.0	9.1	10.3	16.0	7.7	17.6		8.2	53.9	76.7	401.8
1984[2]	33.0		EC-10 (78.5)				10.7	14.0					55.8	78.5	406.0

[1] Preliminary. [2] Estimate. [3] Mainland. *Source: Foreign Agricultural Service, U.S.D.A.* T.300

Salient Statistics of Pigs and Hogs in the U.S.

Year	Pig Crop					Value of Hogs on Farms, Dec. 1		Hog Marketings Ths. Head	Quantity Produced (Live Wt.) Mil. Lbs.	Value of Production Mil. $	Hogs Slaughtered in Thousand Head				
	Spring[2]		Fall[3]								Commercial				
	Sows Farrowed	Pigs Saved	Sows Farrowed	Pigs Saved	Total Pig Crop	$ Per Head	Total Million $				Federally Inspected	Other	Total	Farm	Total
	In Thousands of Head														
1974	6,372	44,792	5,466	38,952	83,954	44.90	2,457	85,504	19,976	6,838	77,071	4,691	81,762	1,321	83,083
1975	4,973	35,530	4,952	35,656	71,186	80.40	3,959	73,627	16,835	7,756	64,926	3,761	68,687	1,193	69,880
1976	5,777	42,177	5,850	42,218	84,395	47.00	2,583	75,747	18,160	7,856	70,454	3,330	73,784	1,175	74,959
1977	6,050	42,960	6,009	43,202	86,162	63.20	3,575	80,939	19,021	7,485	74,019	3,285	77,303	1,139	78,442
1978	6,034	42,481	6,398	46,031	88,512	83.20	5,023	81,271	19,466	9,066	74,139	3,176	77,315	1,102	78,417
1979	7,179	50,571	7,306	52,120	102,691	56.00	3,775	92,327	22,595	9,416	85,425	3,674	89,099	1,080	90,179
1980	7,229	52,286	6,829	49,256	101,542	74.70	4,821	100,388	23,352	8,847	91,882	4,192	96,074	1,100	97,174
1981	6,440	47,600	6,258	46,176	93,776	70.10	4,114	95,895	21,783	9,521	87,850	3,697	91,547	897	92,444
1982	5,592	41,026	5,802	42,995	84,021	90.00	4,853	86,653	19,441	10,180	79,328	1,867	81,196	654	81,850
1983[1]	6,221	46,765	6,140	45,479	92,244	58.90	3,289				84,392				
1984[4]	5,900	43,850													

[1] Preliminary. [2] December–May. [3] June–November. [4] Breeding intentions. *Source: Statistical Reporting Service, U.S.D.A.* T.302

and the lowest March breeding herd inventory since 1973. The market hog inventory for March 1984 totaled 34.2 million head, 5 percent below the year earlier level and 2 percent below two years earlier. Sow farrowings averaged 7.26 pigs per litter vs. 7.44 the preceding year and 7.11 two years earlier.

A well-known market authority stated that the level of pork production indicated by the March USDA Hogs and Pigs report implied tight supplies of pork and high consumer pork prices. Other factors that will be important for hog and pork prices during the remainder of 1984 include the extent of the economic recovery and the supply/demand outlook for beef and poultry.

Futures Markets

Live hog futures are traded on the Chicago Mercantile Exchange (30,000 pounds) and on the Mid-America Commodity Exchange (15,000 pounds).

Hogs and Pigs on U.S. Farms on December 1 In Thousands of Head

Year	Georgia	Illinois	Indiana	Iowa	Kansas	Kentucky	Minnesota	Missouri	Nebraska	No. Carolina	Ohio	South Dakota	Tennessee	Wisconsin	Total
1976	1,600	6,400	4,000	14,200	1,850	1,080	3,600	3,750	3,100	1,940	1,900	1,500	1,010	1,250	54,934
1977	1,720	6,100	4,100	14,500	2,000	1,140	4,000	3,700	3,150	2,300	1,750	1,580	1,180	1,378	56,539
1978	1,800	6,550	4,400	15,100	2,000	1,150	4,100	4,100	3,650	2,350	1,900	1,620	1,300	1,650	60,100
1979	2,360	6,950	4,850	16,200	2,090	1,470	4,900	4,650	4,150	2,650	2,120	2,000	1,400	1,830	67,353
1980	2,300	6,600	4,600	16,100	1,900	1,220	5,100	3,980	3,900	2,460	2,150	1,860	1,140	1,680	64,512
1981	1,520	6,450	4,100	16,300	1,770	1,040	4,300	3,400	4,100	1,980	2,050	1,710	900	1,380	58,688
1982	1,400	5,600	4,400	14,400	1,670	960	3,900	3,500	3,600	2,150	1,820	1,580	750	1,220	53,935
1983[1]	1,310	5,400	4,200	14,800	1,600	1,000	4,270	3,550	3,900	2,300	2,100	1,650	950	1,280	55,819

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.301

U.S. Quarterly 10—State Hogs & Pigs Report In Thousands of Head

Year[2]	Inventory[1]	Breeding[1]	Market[1]	Farrowings	Pig Crop	Year	Inventory[1]	Breeding[1]	Market[1]	Farrowings	Pig Crop
1981	45,970	6,021	39,949	9,821	72,591	1983	43,430	5,605	37,825	9,628	71,892
I	49,090	6,840	42,250	2,192	15,863	I	42,440	5,670	36,770	2,090	15,543
II	45,275	6,500	38,775	2,750	20,741	II	41,840	5,928	35,912	2,768	21,063
III	46,200	6,355	39,845	2,461	18,134	III	45,250	6,224	39,026	2,400	17,675
IV	47,170	6,357	40,813	2,418	17,853	IV	45,880	5,829	40,051	2,370	17,611
1982	42,440	5,670	36,770	8,963	65,767	1984					
I	45,970	6,021	39,949	1,977	14,059	I	43,430	5,605	37,825	1,864	13,536
II	40,610	5,578	35,032	2,391	17,943	II	39,540	5,353	34,187	2,475	
III	41,190	5,689	35,501	2,199	16,254	III					
IV	41,672	5,553	36,117	2,363	17,548	IV					

[1] Beginning of period. [2] Quarters are Dec. preceding year—Feb. (I), Mar.-May (II), June-Aug. (III), & Sept.-Nov. (IV). *Source: Crop Reporting Board, U.S.D.A.* T.181a

U.S. Federally Inspected Hog Slaughter In Thousands of Head

1983 Week ended	1983	1984	1983 Week ended	1983	1983 Week ended	1983
Jan. 1[1]	1,204	1,350	May 7	1,659	Sept. 3	1,613
8	1,457	1,418	May 14	1,642	Sept. 10	1,435
15	1,564	1,708	21	1,607	17	1,772
22	1,561	1,625	28	1,558	24	1,716
29	1,519	1,577	June 4	1,390	Oct. 1	1,732
Feb. 5	1,350	1,544	June 11	1,617	Oct. 8	1,841
12	1,467	1,571	18	1,528	15	1,844
19	1,491	1,579	25	1,510	22	1,895
26	1,449	1,579	July 2	1,557	29	1,844
Mar. 5	1,544	1,656	9	1,348	Nov. 5	1,927
12	1,646	1,791	16	1,538	Nov. 12	1,955
19	1,584	1,691	23	1,493	19	1,981
26	1,546	1,681	30	1,535	26	1,593
Apr. 2	1,558	1,695	Aug. 6	1,476	Dec. 3	1,944
9	1,607		Aug. 13	1,540	Dec. 10	1,941
16	1,738		20	1,535	17	1,804
23	1,704		27	1,473	24	1,465
30	1,694					

Source: Economic Research Service, U.S.D.A. T.181b

HOGS

Federally Inspected Hog Slaughter in the United States In Thousands of Head

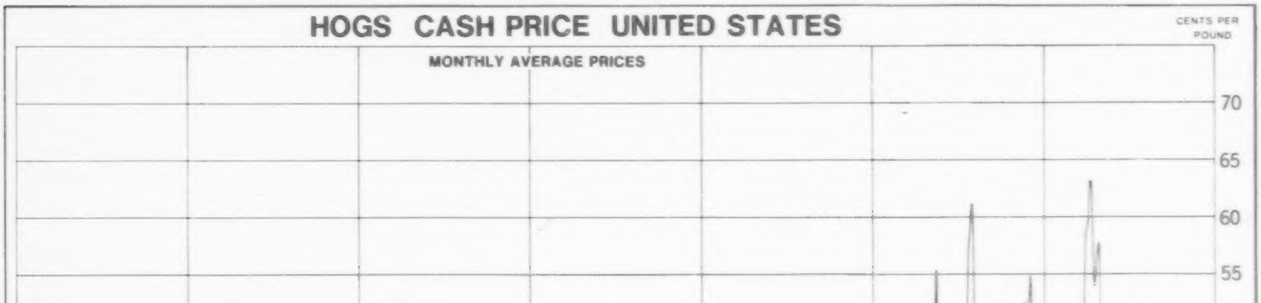
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	5,400	4,873	6,325	5,827	5,086	5,146	4,905	5,968	6,361	6,929	7,100	6,525	70,454
1977	5,840	5,825	7,238	6,395	5,877	5,695	4,908	6,148	6,514	6,507	6,885	6,186	74,019
1978	5,969	5,840	6,795	6,213	6,298	5,778	5,402	6,227	6,203	6,576	6,737	6,101	74,139
1979	6,393	5,693	7,113	6,962	7,284	6,678	6,734	7,662	6,840	8,736	8,097	7,234	85,425
1980	8,038	7,277	7,856	8,456	8,167	7,279	6,910	6,745	7,601	8,404	7,362	7,788	91,882
1981	7,768	6,873	7,988	7,993	7,004	6,682	6,540	6,580	7,320	7,872	7,308	7,923	87,850
1982	6,875	6,340	7,691	20,043			18,310			20,068			79,328
1983[1]	6,421	5,762	7,339	7,010	6,816	6,928	6,270	7,082	7,268	7,829	8,152	7,515	84,392
1984[1]	6,947	6,591											

[1] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.* T.305

Average Live Weight of All Hogs Slaughtered Under Federal Inspection In Pounds Per Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1976	243	236	236	236	239	240	238	236	236	238	243	239	238.4
1977	234	233	234	236	239	241	239	237	236	239	243	239	237.4
1978	236	233	234	237	241	244	241	239	239	243	248	247	240.2
1979	241	237	238	240	243	246	246	240	240	242	245	246	242.0
1980	243	239	239	241	244	244	242	239	239	241	246	247	242.0
1981	246	242	241	242	244	245	242	239	240	243	246	247	243.0
1982[2]	243	239	239	243			242			247			243.0
1983[2]	244	241	241	243	246	247	245	242	240	243	246	244	243.5

[1] Average is weighted by Federally inspected slaughter. [2] Preliminary. *Source: Department of Agriculture* T.311



Average Wholesale Price of Hogs, Average (All Weights) at Sioux City In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	48.23	48.92	46.76	48.06	48.96	50.91	48.31	44.03	39.39	32.69	31.96	38.28	43.19
1977	39.65	40.40	37.61	37.20	41.94	43.89	45.76	44.34	41.39	40.97	39.44	44.13	41.12
1978	46.08	49.26	47.77	46.22	49.25	48.19	46.94	48.83	50.34	52.58	48.68	49.73	48.67
1979	52.11	54.93	49.66	45.29	43.77	39.98	38.58	38.41	38.80	34.74	36.13	38.30	42.13
1980	37.58	37.61	33.97	29.08	29.35	34.97	41.78	48.49	47.42	48.36	46.44	45.07	39.48
1981	41.67	42.78	39.88	40.15	41.96	48.78	51.01	51.14	48.89	46.15	42.10	40.17	44.29
1982	45.77	49.70	49.50	52.16	58.35	59.01	59.70	63.18	63.12	57.27	53.90	55.23	55.21
1983	57.24	57.78	51.37	47.84	47.40	45.73	45.81	49.77	46.05	41.64	38.81	46.53	48.00
1984	50.14	46.68	47.36										

Source: Department of Agriculture

T.307

Hog-Corn Price Ratio[1] at Omaha

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	18.6	18.6	17.7	18.3	17.7	17.6	16.8	16.2	15.1	13.7	14.4	16.3	16.9
1977	16.4	16.8	15.9	16.0	18.8	20.7	23.8	26.4	24.6	22.6	19.2	21.4	19.8
1978	22.7	24.0	22.2	20.4	20.9	20.6	21.8	24.5	25.7	25.5	23.5	23.4	22.9
1979	24.0	25.5	22.6	19.9	18.1	16.4	14.2	15.4	16.2	14.6	15.3	16.0	18.2
1980	16.5	16.1	15.2	12.3	12.0	13.8	15.3	16.1	15.6	15.2	13.8	13.5	14.6
1981	13.0	13.3	12.4	12.3	12.9	15.2	15.9	18.1	19.8	18.7	17.5	16.8	15.5
1982[2]	18.4	20.1	19.8	19.8	21.8	22.1	23.3	27.9	28.1	27.2	22.8	23.0	22.9
1983[2]	23.2	21.7	18.6	15.4	15.2	14.7	14.4	14.6	13.8	12.9	11.9	14.5	15.9
1984[2]													

[1] Ratio computed by dividing average price packer and shipper purchases of barrows and gilts by average price No. 2 yellow corn both at Omaha. This ratio represents the number of bushels of corn required to buy 100 pounds of live hogs. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.*

T.304

Cold Storage Holdings of Frozen Pork[1] in the U.S. on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1976	249.1	216.7	206.2	228.9	250.9	255.4	219.0	176.7	157.3	175.6	201.5	219.1
1977	212.1	197.0	203.4	224.7	264.6	269.9	227.9	178.9	145.5	158.5	166.0	208.5
1978	185.9	174.9	172.4	215.8	281.7	280.6	260.2	219.9	178.7	177.8	207.1	245.2
1979	241.8	224.5	220.4	245.6	278.3	290.2	269.9	225.1	180.2	178.4	219.1	257.2
1980	280.8	285.6	270.4	291.2	345.3	356.5	313.9	263.7	217.3	222.0	269.3	320.7
1981[2]	348.6	350.8	355.9	360.6	403.5	394.4	346.5	283.4	225.1	206.7	238.3	255.2
1982[2]	264.4	247.3	246.3	274.1	—	—	264.1	—	—	183.0	—	—
1983[2]	219.0	224.2	215.8	234.7	272.7	293.0	280.4	253.0	214.1	210.0	240.0	295.2
1984[2]	300.6	295.1	311.7	348.5								

[1] Excludes lard. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.303

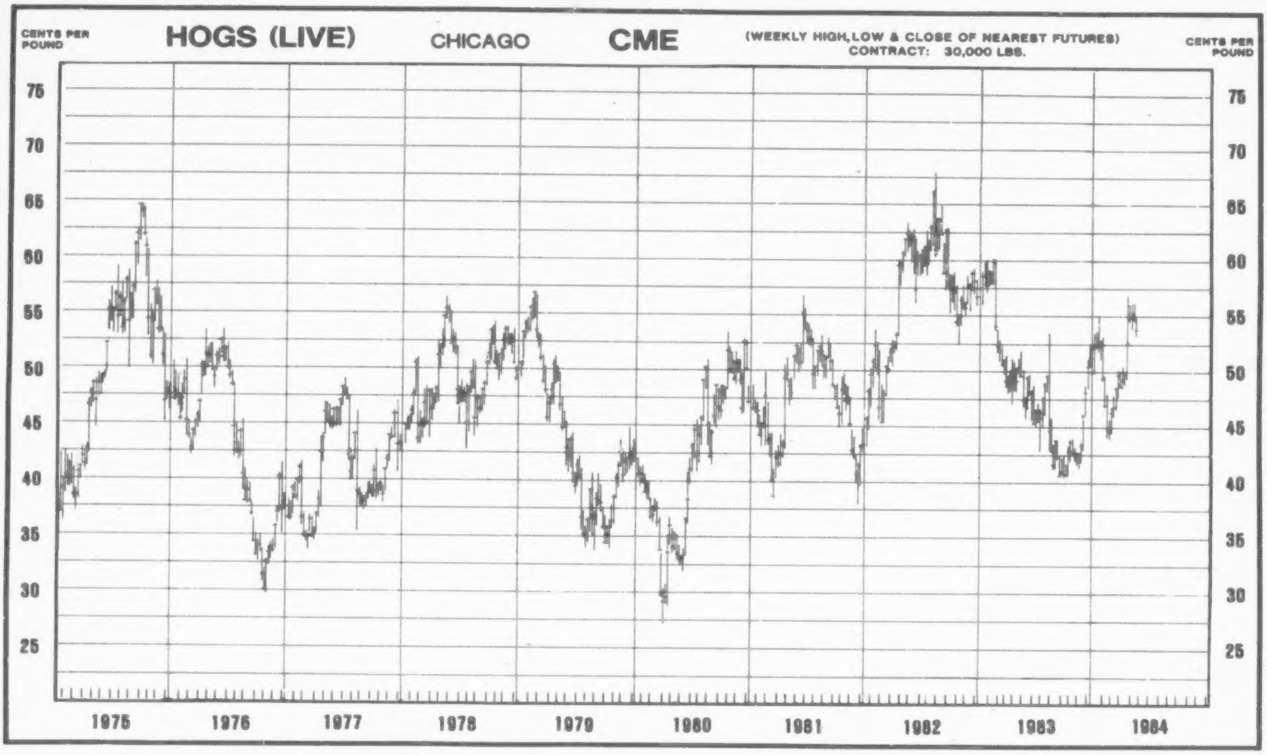
High, Low & Closing Prices of June Live Hogs Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1980	High	44.10	44.60	45.00	44.05	43.70	46.37	43.70	46.90	45.72	46.20	43.00	42.95	36.80	35.40	40.80	46.90
	Low	42.05	39.60	38.35	38.00	37.05	40.80	37.85	41.60	42.00	41.10	40.10	33.50	31.30	32.47	31.90	31.30
	Close	43.62	39.75	42.10	38.40	43.40	41.80	42.10	42.97	43.97	43.10	41.47	34.30	34.47	33.00	39.75	—
1981	High	45.60	45.05	47.70	51.22	52.80	57.35	59.50	61.80	63.25	53.90	55.55	49.90	51.50	52.50	54.70	63.25
	Low	42.40	43.77	42.65	46.80	49.35	50.40	53.80	56.25	52.02	50.75	48.87	43.52	48.25	46.85	49.75	42.40
	Close	44.37	44.70	46.45	50.80	50.47	56.12	57.77	61.80	52.02	52.65	48.87	49.82	49.00	52.20	54.05	—
1982	High	59.90	58.70	58.90	56.60	56.10	53.80	50.60	50.47	46.60	52.65	53.05	56.45	60.00	63.32	62.75	63.32
	Low	56.40	55.82	55.50	53.20	51.05	48.10	47.57	44.65	38.75	45.35	48.35	49.82	55.10	58.85	58.15	438.75
	Close	56.55	58.65	55.50	55.80	51.12	49.00	50.02	45.85	45.67	52.32	49.95	55.47	59.92	62.12	58.82	—
1983	High	53.40	54.00	53.25	53.00	52.50	57.17	55.85	55.30	56.70	58.15	56.45	55.30	51.87	51.87	49.80	5815
	Low	50.60	51.15	48.00	50.10	48.90	51.12	51.65	51.45	53.30	54.60	53.55	51.15	48.25	46.35	45.80	45.80
	Close	53.40	53.47	51.35	52.10	52.15	54.70	52.95	55.00	55.12	55.50	54.07	52.10	49.55	46.62	46.65	
1984	High	47.75	47.75	46.50	50.50	56.00	55.0	52.15	54.25	53.75	56.00	53.20	57.27	58.00			
	Low	46.75	45.40	43.90	43.80	48.90	49.9	49.00	52.20	52.00	52.30	50.40	51.30	54.20			
	Close	46.75	45.80	45.15	49.80	53.55	50.05	51.97	53.55	53.05	52.75	51.70	56.12	54.42			

Source: Chicago Mercantile Exchange

T.308

HOGS



Month-End Open Interest of Live Hogs Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	26,338	27,694	25,613	24,204	27,004	30,108	24,544	25,730	26,155	24,313	26,317	24,966
1980	27,387	27,765	21,857	24,795	25,814	29,011	27,635	28,725	31,696	36,962	38,534	26,816
1981	21,267	21,588	20,767	28,147	31,149	26,639	19,557	20,944	23,471	21,945	22,294	17,924
1982	27,528	29,960	43,387	51,056	63,760	46,002	42,884	51,530	48,263	48,751	47,067	43,791
1983	45,184	41,338	39,469	31,915	31,014	30,794	27,173	33,668	33,425	30.049	30,071	33,820
1984	33,049	35,159	35,289	33,122								

Source: Chicago Mercantile Exchange T.309

Volume of Trading of Live Hogs Futures at Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	143.1	137.9	185.4	132.0	145.1	160.9	144.1	164.5	151.3	154.1	162.9	124.5	1,805.7
1980	152.9	122.3	138.3	158.8	133.8	170.8	189.7	188.6	239.1	258.1	195.3	201.4	2,153.8
1981	174.8	182.0	197.5	212.0	230.7	262.9	179.8	153.9	171.9	178.6	160.2	153.7	2,258.1
1982	178.7	195.6	262.6	222.6	288.0	408.3	300.1	344.5	347.2	383.4	324.9	305.1	3,561.0
1983	291.6	254.7	213.8	230.6	254.1	262.1	217.4	279.9	220.8	174.2	197.5	194.2	2,790.7
1984	232.2	212.7	243.8	172.3									

Source: Chicago Mercantile Exchange T.310

Average Price Received by Farmers for Hogs in the U.S. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1980	36.20	36.70	33.40	28.00	28.60	33.10	41.20	46.20	46.10	47.20	45.60	43.80	38.00
1981	40.90	41.30	38.80	39.00	40.90	47.40	49.30	49.20	48.60	45.00	41.50	39.00	43.90
1982	43.40	48.30	48.60	51.20	56.70	57.50	57.80	61.20	61.30	55.80	52.50	53.60	52.30
1983[2]	55.30	56.10	50.40	46.90	45.90	43.90	43.40	46.70	44.10	40.40	37.50	44.20	46.30
1984[2]	48.50	45.40	45.80	47.40									

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.306

Honey

U.S. production of honey in 1983 was estimated to have totaled 205 million pounds, nearly 11 percent below the 1982 U.S. production figure of 230 million pounds. Imports during 1983 were expected to total a record 110 million pounds compared with 1982 imports of 92 million pounds. Overall 1983 U.S. exports were 7.5 million pounds. The domestic disappearance of honey was estimated to be approximately 278 million pounds, up from 251 million in 1982 because of large Commodity Credit Corp. disposals to welfare food banks and school lunch programs.

The support price for 1983-crop white honey (effective April 1983–March 1984) was set at 62.2 cents a pound, while the November U.S. market price was around 51 cents. About 67 million pounds of the 1983 crop had been placed under loan as of November 16, 1983, about the same pace as in 1982. About 75 million pounds of the 1982 crop were forfeited to the Commodity Credit Corp. Total forfeitures for 1983 were expected to exceed the 1982 total.

In April 1984, the USDA announced that honey producers would receive average loan purchase rates of 65.8 cents per pound on their 1984 production, 3.6 cents above the 1983 support level. The extracted honey loan and purchase rates will range from 54.0 cents to 69.0 cents per pound, depending on color and class. The rates, which apply to extracted honey in 60 pound or larger containers, were:

COLOR and/or CLASS	CENTS PER POUND
White or lighter	69.0
Extra light amber	65.0
Light amber	60.0
Other table and non-table honey	54.0

According to an administrator of the USDA Agricultural Stabilization and Conservation Service, the price support rates represent 60 percent of the April 1984 adjusted parity price of 109.7 cents per pound, the minimum required under current legislation.

World Production of Honey In Thousands of Metric Tons

Year	Argentina	Australia	Brazil	Canada	China (Mainland)	Ethiopia	France	W. Germany	Japan	Mexico	Poland	Spain	Turkey	United States	U.S.S.R.[2]	World Total[2]
1976	28.0	21.4	12.0	25.4	55.0	19.4	14.5	22.0	6.1	44.0	9.6	11.0	24.1	90.0	188.0	784.2
1977	22.0	14.9	14.0	25.4	60.0	19.0	8.2	20.0	6.2	60.0	10.0	12.0	21.7	81.0	208.0	798.3
1978	35.0	18.6	16.0	30.6	75.0	20.0	9.5	15.0	8.5	54.0	12.0	11.0	21.7	104.5	179.0	827.7
1979	30.0	25.0	18.0	32.9	110.0	20.0	14.4	9.9	7.5	52.0	13.0	12.0	23.7	107.8	189.0	880.1
1980	28.0	18.0	20.0	29.2	80.0	20.5	12.0	11.0	6.2	60.0	10.0	13.0	23.0	81.6	190.0	884.3
1981[1]	34.0	21.0	24.0	32.9	115.0	21.0	10.0	13.0	8.0	62.0	10.0	13.0	23.0	81.6	193.0	884.3
1982[1]							25.0								180.0	902

[1] Preliminary. [2] New series beginning 1976. *Source: Foreign Agricultural Service, U.S.D.A.* T.312

Salient Statistics of Honey in the United States

			Honey Production; By States													Received By Farmers	
Year	Number of Colonies Thous.	Yield Per Colony Lbs.	Total U.S.	California	Florida	Iowa	Minnesota	So. Dak.	Texas	Wisconsin	Domestic Disapp.	Imports For Consumption	Domestic Exports	Stocks Jan. 1	Extracted Florida Extra Light[2]	Bees-Wax	All Honey
			In Millions of Pounds												¢ Lb.		
1976	4,269	46.4	198.0	13.7	27.4	6.6	14.3		9.4	10.3	258.7	66.5	4.7	33.2	39.3	112.0	49.9
1977	4,323	41.2	178.1	13.7	14.4	6.1	12.0		9.0	9.6	240.8	63.9	5.5	34.3	40.6	158.0	52.9
1978	4,090	56.6	231.5	31.2	23.9	4.6	13.9		8.7	6.3	277.3	56.0	8.0	30.0	45.1	174.0	54.6
1979	4,163	57.3	238.7	17.1	27.3	6.6	15.8	17.3	11.4	8.8	282.7	58.6	8.8	32.2	50.2	175.0	59.3
1980	4,141	48.2	199.8	23.2	20.3	6.3	13.7	8.1	6.9	6.0	226.2	49.0	8.5	38.0	49.7	183.0	61.5
1981[1]	4,213	44.1	185.9	9.0	24.1	3.4	8.2	9.2	11.4	4.1	232.0	77.3	9.2	52.1	52.7	191.0	63.2
1982[1]	4,250	54.1	230.0								250.8	92.0	8.5	74.1	54.5		
1983[1]	4,275	48.0	205.0								277.9	109.8	7.5	136.8			

[1] Preliminary. [2] Amber, to Water White, Orange. *Source: Crop Reporting Board, U.S.D.A.* T.313

Wholesale Price Index of Honey (Extracted) at Chicago 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	228.9	239.8	238.0	231.6	228.9	228.9	242.1	245.2	249.7	244.3	N.A.	247.3	238.6
1978	247.1	245.8	252.5	254.0	255.6	247.4	N.A.	250.5	248.7	248.4	246.4	246.5	249.4
1979	250.0	259.3	270.8	255.8	264.3	286.7	277.7	288.8	283.4	286.4	288.3	283.6	274.6
1980	286.8	289.6	287.1	272.5	284.1	283.0	277.2	283.4	284.0	285.6	285.9	288.7	284.0
1981	298.7	296.9	285.4	299.7	294.3	287.1	296.4	304.4	295.0	305.3	304.9	295.7	297.0
1982	299.7	294.3	306.6	294.3	305.2	305.2	299.7	302.2	306.3	305.2	308.8	295.7	301.9
1983	305.2	310.6	318.8	311.2	305.2	300.8	298.1	293.7	305.2	305.2	316.1	299.7	305.8
1984	302.5	299.7											

Source: Bureau of Labor Statistics (0254-0101.01) T.314

Interest Rates

The general rate of interest is considered to be the most significant ratio generated within the financial marketplace. Roughly speaking, the rate of interest is the premium that present money commands over money to be paid at some time in the future. As such, it is a paramount consideration in decisions to invest present capital in hopes of a future return. Interest rates ultimately determine the extent of economic growth and the prices that will be bid for labor and equipment intended for future production. The relative values of currencies are also affected by interest rate fluctuations. U.S. interest rates are directly influenced by the various Federal Reserve money market operations that expand or contract the amount of funds available to the loan market.

The economic recovery that had begun in 1983 continued throughout the first half of 1984, despite some faltering of interest rate markets in the early part of the year. The recovery in industrial production was the strongest since the 1957–58 recession, and some industries reached production level highs not attained since the 1970's. The recovery in the auto industry exceeded most expectations, and auto production was at or near capacity levels for some intermediate- and standard-sized cars. Housing starts in the beginning of 1984 rose by nearly 15 percent to a surprising 1.915 million unit annual rate, the highest rate since 1978. A U.S. Department of Commerce survey suggested a continuation of a strong recovery in capital investment during 1984. Real capital spending for 1984 was projected as increasing 9.4 percent, one of the strongest capital spending recoveries in postwar U.S. history.

A surge in money supply growth in the first part of 1984, together with the strengthening of the economy referred to above resulted in conjectures that the economy was possibly "overheating" and that further monetary easing by the Federal Reserve was less likely. The stronger economy of early 1984 was believed by many to have increased the prospects for a clash between public and private sector demand for credit. In his testimony before Congress in early February 1984, Federal Reserve Chairman Volcker indicated that the failure to reduce the federal budget deficit could eventually bring about a reduction in capital inflows to the economy and would lead to higher interest rates. Official projections by the Congressional Budget Office indicated that federal deficits over the next five years could continue to grow, and that interest rates could continue to rise.

Early in 1984, Fed Chairman Volcker stated that the Fed would not prevent interest rate increases. This led to a softening of markets for credit instruments and financial futures. The Fed funds rate averaged 9.86 percent throughout March 1984 vs. 9.56 percent in January and 8.77 percent in March 1983. Long term interest rates, as represented by Treasury bond yields, averaged 11.77 percent in March vs. 11.44 percent in December 1983 and 10.37 percent in January 1983.

The M1 money supply (roughly, currency in circulation plus checking deposits) increased at a 10.5 percent annual rate in January 1984 compared with 5.3 percent in December 1983. The 1984 targets for M1 growth were set at 4 to 8 percent annually. In February 1984, weekly M1 figures were altered to conform to the contemporaneous reserve accounting reporting cycle.

Futures Markets

Futures in Treasury bonds, T-notes and GNMA securities are traded on the Chicago Board of Trade. Futures in T-bill (90-day), Domestic Bank CDs, and Eurodollars are traded on the Chicago Mercantile exchange. Smaller T-bill and T-bond futures contracts are traded on Chicago's MidAmerica Commodity Exchange. Eurodollars, Gilts, and 3-month Sterling Deposits are traded on the London International Financial Futures Exchange.

U.S. Producer Commodity Price Index (Wholesale, All Commodities) 1967 = 100

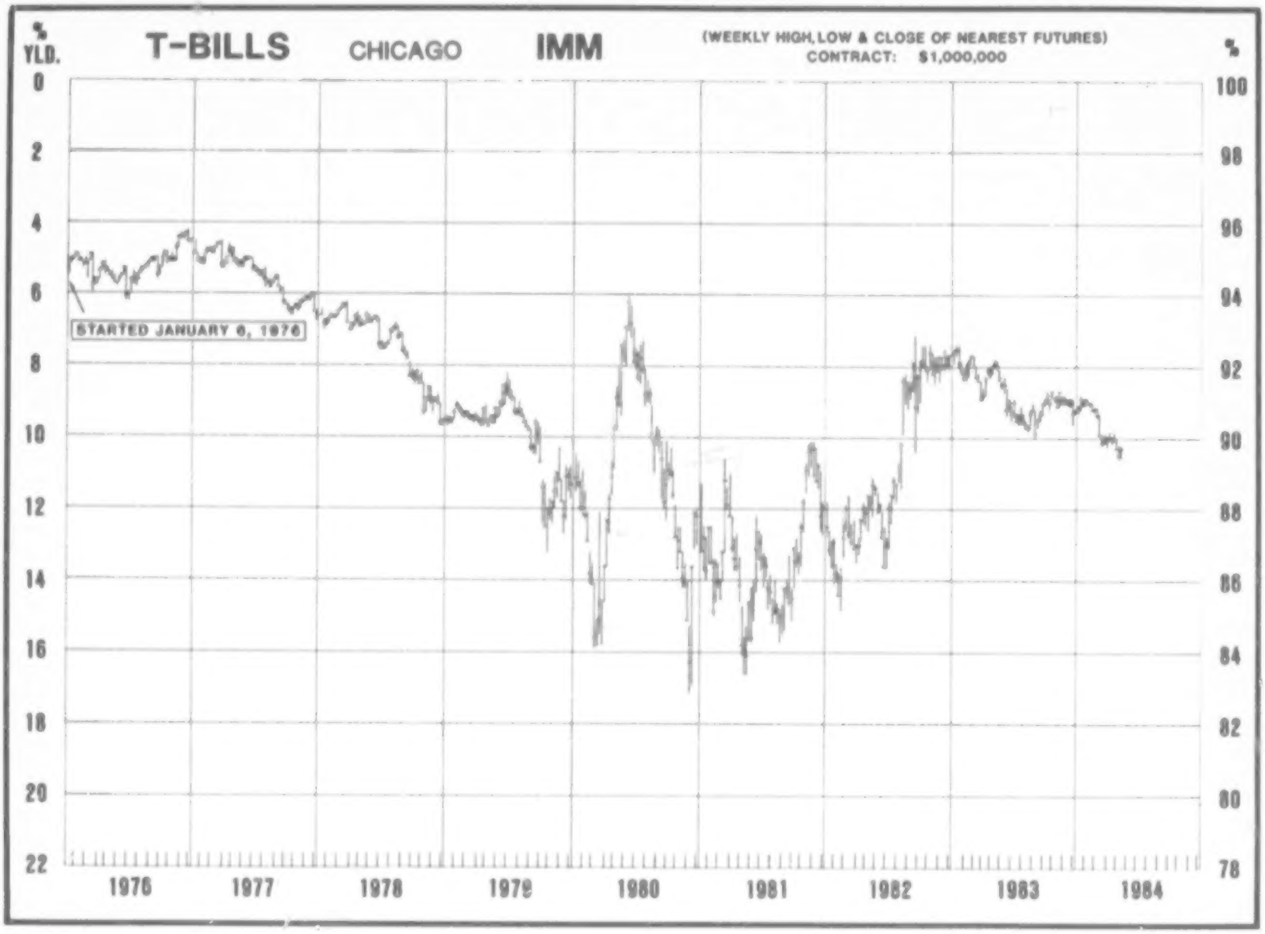
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	200.1	202.1	203.7	206.5	208.0	209.6	210.7	210.6	212.4	214.9	215.7	217.5	209.3
1979	220.8	224.1	226.7	230.0	232.0	233.5	236.9	238.3	242.0	245.6	247.2	249.7	235.6
1980	254.9	260.2	261.9	262.8	264.2	265.6	270.4	273.8	274.6	277.8	279.1	280.8	268.8
1981	284.8	287.6	290.3	293.4	294.1	294.8	296.2	296.4	295.7	296.1	295.5	295.8	293.4
1982	298.3	298.6	298.0	298.0	298.6	299.3	300.4	300.2	299.3	299.8	300.3	300.7	299.3
1983[1]	299.9	300.9	300.6	300.6	301.5	302.4	303.2	304.7	305.3	306.0	305.5	306.0	303.1
1984[1]	308.1	308.8	311.1										

[1] Preliminary. *Source: Bureau of Labor Statistics* T.315

U.S. Consumer Price Index (Retail Price Index for All Items: Urban Consumers) 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	187.2	188.4	189.8	191.5	193.3	195.3	196.7	197.8	199.3	200.9	202.0	202.9	195.4
1979	204.7	207.1	209.1	211.5	214.1	216.6	218.9	221.1	223.4	225.4	227.5	229.9	217.4
1980	233.2	236.4	239.8	242.5	244.9	247.6	247.8	249.4	251.7	253.9	256.2	258.4	246.8
1981	260.5	263.2	265.1	266.8	269.0	271.3	274.4	276.5	279.3	279.9	280.7	281.5	272.4
1982	282.5	283.4	283.1	284.3	287.1	290.6	292.2	292.8	293.3	294.1	293.6	292.4	289.1
1983[1]	293.1	293.2	293.4	295.5	297.1	298.1	299.3	300.3	301.8	302.6	303.1	303.5	298.4
1984[1]	305.2	306.6	307.3	308.8									

[1] Preliminary. *Source: Bureau of Labor Statistics* T.316



Month-End Open Interest of 13 Wk.[1] Treasury Bill Futures in Chicago In Thousands of Contracts

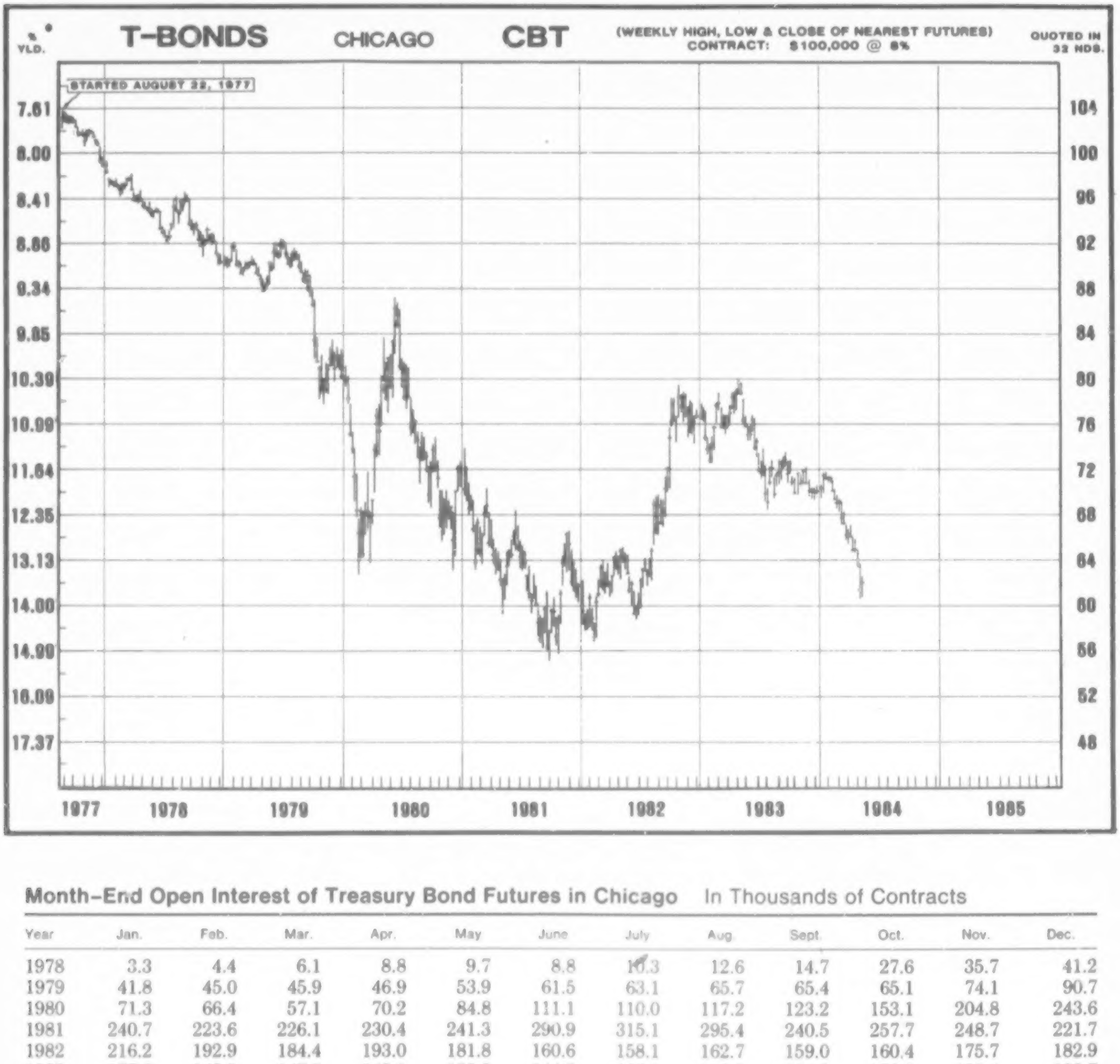
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	12.5	13.7	15.6	17.6	20.3	23.7	27.7	34.4	33.9	47.9	52.6	59.2
1979	54.2	54.2	52.7	56.4	63.7	61.2	46.8	40.9	41.4	35.4	42.8	36.5
1980	30.2	25.0	28.5	28.2	24.7	25.2	22.9	23.1	21.4	24.2	39.2	42.9
1981	45.7	38.0	32.8	28.9	35.6	38.9	45.7	43.6	32.3	38.7	36.2	30.1
1982	33.9	33.0	36.5	43.9	52.5	41.4	52.2	59.6	51.1	45.8	50.1	49.0
1983	47.7	46.8	38.6	44.6	43.8	40.4	45.1	39.9	47.8	51.2	52.4	40.8
1984	48.7	50.8	48.8	55.8								

[1] 90-day U.S. Treas. Bill. *Source: International Monetary Market (Chicago)* T.322

Volume of Trading of 13 Wk.[1] Treasury Bill Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	37.9	24.7	33.6	41.9	38.9	48.4	39.9	74.1	87.2	98.6	137.0	106.8	772.0
1979	89.8	78.6	103.8	111.5	154.7	193.1	182.0	144.5	204.1	251.7	225.8	190.9	1,930.5
1980	237.5	245.4	290.3	350.1	321.2	250.7	224.4	204.9	231.1	274.3	287.7	401.1	3,338.8
1981	446.6	414.4	408.5	407.6	426.1	511.0	487.8	482.0	525.8	516.0	509.5	496.5	5,631.3
1982	503.5	465.5	638.7	529.1	595.4	546.0	615.2	738.4	628.6	521.4	442.4	374.7	6,598.8
1983	302.2	337.9	361.4	308.5	331.4	336.2	283.9	371.1	273.5	309.8	275.7	268.5	3,789.9
1984	200.0	213.4	304.9	300.2									

[1] 90-day U.S. Treas. Bill. *Source: International Monetary Market (Chicago)* T.323



Month-End Open Interest of Treasury Bond Futures in Chicago In Thousands of Contracts

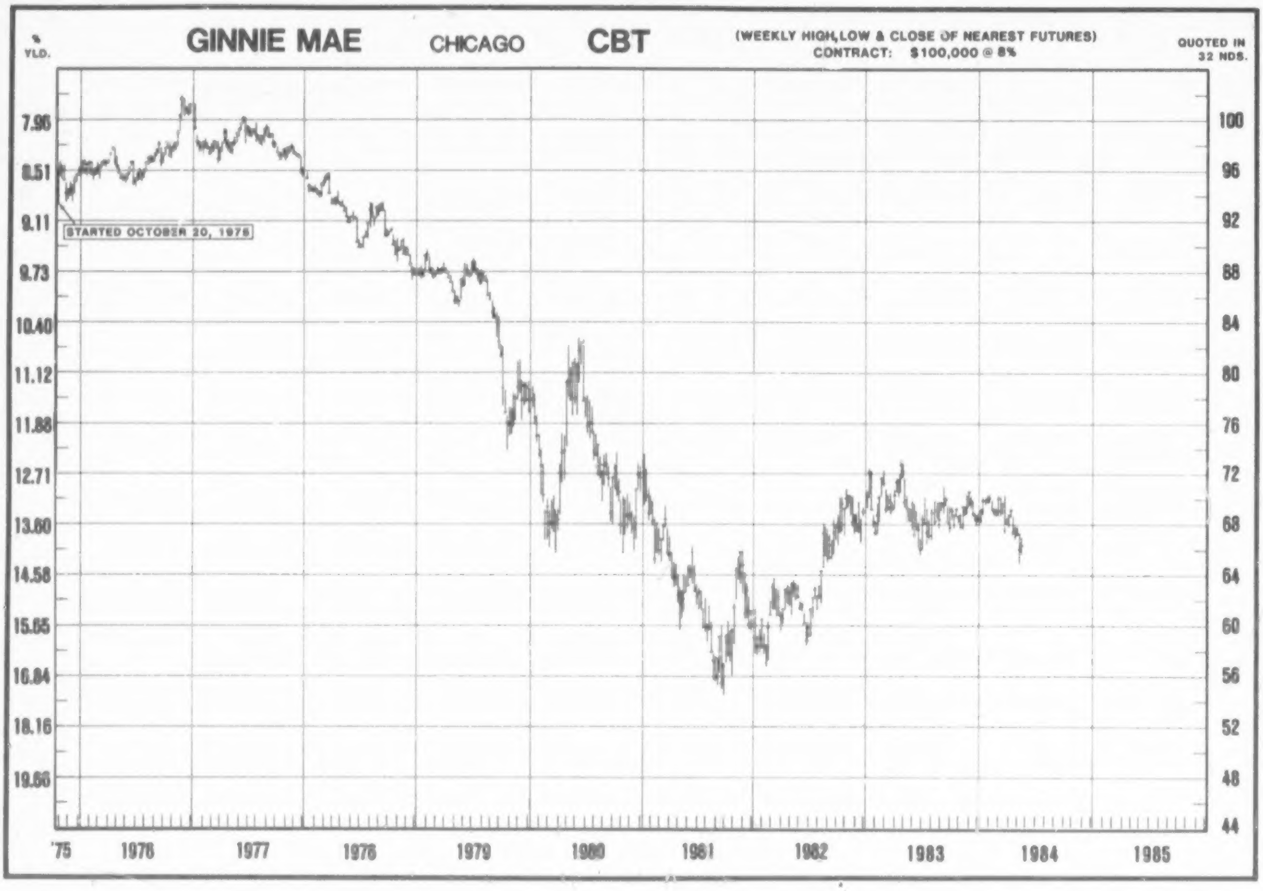
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	3.3	4.4	6.1	8.8	9.7	8.8	10.3	12.6	14.7	27.6	35.7	41.2
1979	41.8	45.0	45.9	46.9	53.9	61.5	63.1	65.7	65.4	65.1	74.1	90.7
1980	71.3	66.4	57.1	70.2	84.8	111.1	110.0	117.2	123.2	153.1	204.8	243.6
1981	240.7	223.6	226.1	230.4	241.3	290.9	315.1	295.4	240.5	257.7	248.7	221.7
1982	216.2	192.9	184.4	193.0	181.8	160.6	158.1	162.7	159.0	160.4	175.7	182.9
1983	177.6	142.9	147.5	142.1	130.3	144.5	165.1	142.5	150.0	172.9	193.4	183.7
1984	170.7	163.0	158.4	173.8								

Source: Chicago Board of Trade T.317

Volume of Trading of Treasury Bond Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	11.5	10.2	14.2	19.1	23.4	33.1	37.8	62.2	60.3	87.7	95.2	98.6	555.4
1979	95.3	98.3	95.5	110.4	181.8	169.1	140.5	167.2	221.2	271.1	249.4	259.9	2,059.6
1980	311.1	332.4	349.3	423.4	520.5	608.6	502.7	516.4	501.2	691.6	722.5	1,009.8	6,489.6
1981	846.7	868.6	975.9	998.9	1,178.1	1,094.4	1,081.8	1,191.5	1,313.7	1,289.1	1,691.5	1,377.9	13,908.0
1982	1,266.4	1,306.1	1,413.9	1,259.4	1,408.2	1,254.8	1,145.5	1,669.5	1,474.4	1,644.0	1,545.2	1,352.3	16,739.7
1983	1,333.9	1,447.8	1,600.4	1,262.9	1,679.2	1,704.8	1,491.3	2,312.7	1,605.7	1,839.4	1,697.0	1,497.7	19,550.5
1984	1,475.7	1,891.3	2,629.4	2,068.6									

Source: Chicago Board of Trade T.319



Month-End Open Interest of GNMA (CDR) Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	20.4	19.6	20.3	24.0	27.8	33.5	39.4	43.6	41.6	54.4	60.0	62.7
1979	62.4	63.5	62.9	62.8	68.5	73.3	70.6	75.0	77.0	71.0	76.3	89.0
1980	65.9	54.7	46.1	55.5	60.6	71.9	67.6	63.1	67.1	83.2	98.5	115.2
1981	97.0	97.1	99.8	105.7	107.5	121.0	133.9	116.6	96.5	95.2	82.7	77.2
1982	70.0	61.1	64.3	69.3	58.0	51.9	51.8	44.0	45.4	42.2	41.9	40.0
1983	34.9	35.4	45.6	41.3	42.4	44.9	50.0	52.4	45.6	42.2	43.4	37.4
1984	39.1	41.3	36.8	34.7								

Source: Chicago Board of Trade

T.325

Volume of Trading of GNMA (CDR) Futures in Chicago in Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	48.4	46.7	57.1	57.2	60.1	75.2	73.6	109.2	96.1	110.9	109.0	109.6	953.2
1979	89.8	79.8	68.1	82.0	99.8	111.8	77.0	95.3	164.9	164.9	157.9	180.4	1,371.1
1980	170.0	155.5	156.3	190.3	219.7	248.4	162.0	151.6	133.9	205.0	214.5	318.7	2,326.3
1981	179.8	159.9	186.5	202.3	228.8	188.5	162.0	156.2	189.8	194.0	242.2	202.8	2,292.9
1982	188.8	184.1	182.6	140.6	159.3	156.3	154.8	222.7	170.5	218.3	143.6	134.0	2,055.6
1983	143.5	133.8	147.7	125.3	176.0	177.7	199.9	166.6	90.9	99.2	126.4	105.2	1,692.0
1984	67.3	118.2	168.9	80.6									

Source: Chicago Board of Trade

T.324

INTEREST RATES

High, Low & Closing Prices of June Treasury Bond Futures in Chicago In 32nds of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	FUTURES				102–15	102–21	102–06	101–12	101–01	98–30	97–04	97–19	96–25	95–24	95–07	102–21
	Low	TRADING				101–10	101–27	100–10	99–25	98–11	96–19	95–24	95–25	95–10	94–13	94–06	94–06
	Close	BEGAN AUG. 22, 1977				102–13	102–07	100–10	100–30	99–05	97–11	96–14	95–30	95–15	94–13	94–07	—
1979	High	95–07	94–10	93–16	92–28	95–06	96–03	94–09	93–31	93–15	92–08	92–09	90–27	90–19	90–09	91–01	98–11
	Low	93–29	92–20	91–26	91–03	92–15	93–08	91–00	92–02	90–09	90–01	89–13	89–09	88–02	87–20	89–16	89–20
	Close	94–03	92–20	91–28	92–20	94–21	93–08	91–11	92–30	90–18	91–23	89–21	90–05	88–06	89–22	90–30	—
1980	High	90–31	90–18	92–13	92–12	91–18	89–18	87–13	84–14	85–00	82–24	75–07	71–24	77–27	83–20	87–07	95–31
	Low	88–24	88–08	89–24	89–27	89–09	87–05	78–11	78–15	80–20	74–07	63–15	64–30	67–12	77–00	78–09	63–15
	Close	88–27	89–31	91–27	90–20	89–11	87–21	80–12	83–01	82–29	75–04	69–00	67–27	77–02	79–14	85–25	—
1981	High	79–21	84–00	85–15	81–08	77–00	75–23	75–04	71–20	73–18	74–22	70–15	70–15	67–17	64–30	67–16	88–08
	Low	71–23	76–30	77–31	74–26	71–27	69–11	67–22	66–05	65–28	69–04	64–05	64–20	61–25	59–11	64–04	59–11
	Close	77–16	79–03	80–23	75–04	73–26	71–10	68–17	70–02	72–06	70–09	65–31	67–02	61–28	64–24	65–13	—
1982	High	68–14	67–25	69–29	66–23	64–30	62–04	61–09	66–24	66–14	62–16	62–26	64–08	64–27	65–05	62–18	74–20
	Low	64–11	62–19	65–28	62–28	59–04	56–08	56–12	58–30	60–20	58–05	57–10	60–22	61–05	62–15	59–01	56–08
	Close	64–15	67–17	65–30	63–01	59–17	57–03	59–05	65–21	62–04	61–01	61–14	61–30	63–06	62–27	59–24	—
1983	High	67–20	66–25	63–30	65–06	69–29	71–05	77–04	77–20	76–24	77–04	77–13	78–08	79–02	80–00	76–29	80–00
	Low	63–22	64–15	60–29	61–27	63–18	67–17	70–09	73–18	73–21	72–14	71–27	74–28	75–31	74–20	73–24	57–28
	Close	65–11	64–15	62–19	64–01	67–20	70–27	75–11	73–28	76–00	72–21	76–22	75–31	78–30	74–21	73–27	—
1984	High	77–00	77–28	74–29	73–05	71–12	72–02	75–15	70–31	70–20	71–06	70–26	68–22	67–00			
	Low	74–13	72–29	72–00	67–26	66–28	68–09	69–18	68–23	68–05	68–30	67–22	65–22	64–17			
	Close	77–00	72–30	73–03	68–16	68–12	71–23	69–19	70–17	69–15	70–07	68–07	66–07	64–22			
1985	High	65–06															
	Low	62–29															
	Close	62–31															

Source: Chicago Board of Trade

T.320

High, Low & Closing Prices of June GNMA (CDR) Futures in Chicago In 32nds of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	95–21	95–05	96–17	96–22	97–28	97–30	97–08	96–28	96–19	95–12	94–12	94–28	94–09	93–17	92–22	97–30
	Low	94–00	94–00	94–25	95–20	95–30	96–30	95–30	95–25	95–00	93–27	93–07	93–09	93–05	91–26	91–19	91–19
	Close	94–07	94–28	96–01	96–03	97–20	97–09	96–03	96–16	95–18	94–12	93–30	93–13	93–12	91–28	91–21	—
1979	High	92–15	91–18	89–23	90–08	91–31	92–16	91–13	90–29	90–17	89–16	89–22	88–20	88–09	87–16	88–19	96–20
	Low	91–12	89–10	88–06	87–31	89–24	90–11	88–26	89–15	87–21	87–17	87–12	87–19	85–27	85–14	86–23	85–14
	Close	91–15	89–10	88–07	89–31	91–14	90–24	89–00	90–02	87–30	89–04	87–26	88–00	85–31	86–28	87–20	—
1980	High	88–12	87–09	88–21	88–26	88–03	85–28	82–00	81–16	82–13	79–11	74–11	70–10	76–08	82–05	82–12	93–20
	Low	85–30	85–19	86–20	86–30	85–28	81–27	73–18	75–00	75–16	73–04	65–22	65–18	67–15	76–16	76–18	65–18
	Close	86–02	86–23	88–06	87–16	85–29	82–10	75–31	79–27	79–18	74–00	69–06	68–15	76–00	77–31	81–18	—
1981	High	77–00	82–12	82–02	77–22	74–24	73–15	73–12	70–20	73–04	74–07	70–15	69–16	67–01	64–00	65–16	91–02
	Low	69–02	76–07	76–06	72–23	69–28	68–11	67–06	66–13	65–31	69–00	65–14	65–19	61–30	59–21	63–03	58–21
	Close	76–16	77–15	77–15	73–03	71–14	70–05	67–31	69–07	71–27	70–08	66–21	66–21	62–01	63–23	63–22	—
1982	High	67–06	66–05	67–05	63–03	62–16	60–04	60–12	65–23	65–00	61–07	61–30	63–00	63–07	63–17	61–30	82–16
	Low	63–05	62–14	63–08	60–31	57–10	54–22	55–00	59–10	59–16	57–15	56–19	59–17	60–04	60–29	59–23	54–22
	Close	63–05	65–31	63–08	61–05	57–14	55–15	59–17	64–15	60–29	60–02	60–18	60–20	61–22	62–04	60–04	—
1983	High	62–15	62–23	60–15	61–27	66–12	67–11	69–10	70–00	68–21	71–19	70–27	71–10	72–00	73–00	69–30	73–00
	Low	59–17	60–16	57–21	58–14	60–07	63–19	65–16	65–30	65–22	66–15	66–04	68–04	69–09	68–09	67–01	54–28
	Close	61–03	60–25	59–05	60–28	63–31	66–04	68–11	66–02	68–11	66–22	70–12	69–07	71–27	68.10	67–05	—
1984	High	67–25	70–09	67–31	67–20	67–07	67–29	67–23	68–21	68–05	69–10	69–15	69–15	69–07			
	Low	65–03	66–03	65–10	64–14	64–05	65–25	66–01	66–00	66–28	67–09	67–21	67–13	66–29			
	Close	67–20	66–03	66–06	65–08	65–11	67–06	66–21	68–06	67–18	68–31	68–08	68–05	67–16			
1985	High	66–02															
	Low	64–07															
	Close	64–09															

Source: Chicago Board of Trade

T.326

High, Low & Closing Prices of June 13 Wk. Treasury Bill Futures in Chicago In Points of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	93.59	93.31	93.69	93.57	93.50	93.51	93.28	93.28	93.29	93.17	93.15	93.33	93.49	93.48	93.41	93.80
	Low	92.52	92.53	93.19	93.01	92.95	93.10	92.80	92.92	92.95	92.63	92.78	93.00	93.03	93.09	93.20	92.26
	Close	92.60	93.22	93.61	93.15	93.38	93.29	92.97	93.25	93.13	92.99	93.13	93.02	93.13	93.21	93.23	—
1979	High	92.12	91.87	91.90	91.81	92.11	92.12	91.55	91.08	90.83	90.74	90.88	90.72	90.87	90.84	91.45	92.83
	Low	91.76	91.62	91.49	91.51	91.62	91.40	90.50	90.39	90.14	90.16	90.35	90.43	90.31	90.30	90.50	90.14
	Close	91.76	91.68	91.55	91.75	91.93	91.51	90.58	90.62	90.22	90.65	90.47	90.51	90.50	90.60	91.06	—
1980	High	90.91	91.55	92.59	92.50	92.30	91.65	91.41	91.22	91.01	90.50	89.05	86.40	89.94	92.73	93.97	93.97
	Low	90.51	90.48	91.34	91.54	90.93	90.36	88.10	88.85	89.21	88.37	86.06	84.20	85.40	89.75	92.00	84.20
	Close	90.62	91.46	92.32	91.89	91.11	91.03	89.29	90.55	90.17	88.84	86.49	85.82	89.90	92.30	92.12	—
1981	High	90.90	92.00	92.64	92.04	91.10	89.61	89.77	88.47	88.89	89.43	89.00	89.38	88.95	85.90	86.48	92.64
	Low	87.51	90.60	91.15	90.65	88.45	87.66	87.47	87.08	85.40	87.31	86.36	86.64	85.52	83.35	84.34	83.35
	Close	90.79	91.60	91.50	90.72	89.13	88.31	87.51	87.25	88.18	88.89	87.19	88.77	85.55	85.39	85.79	—
1982	High	89.20	87.81	88.47	87.86	87.52	87.00	87.61	89.54	89.42	87.85	87.48	88.32	88.16	88.94	88.46	91.26
	Low	87.09	86.03	87.40	86.91	85.95	85.48	85.53	87.42	86.93	85.85	85.45	86.46	86.67	87.41	87.16	85.45
	Close	87.10	87.73	87.92	87.21	86.08	85.60	87.55	89.19	87.76	86.90	86.92	86.83	87.88	88.57	87.18	—
1983	High	87.37	87.82	87.56	87.93	89.12	89.66	91.19	91.43	91.94	92.26	92.40	92.28	92.04	92.22	91.65	92.40
	Low	86.45	87.00	86.32	86.75	87.63	87.95	89.29	90.57	90.67	91.41	91.26	91.12	91.20	91.28	91.12	85.83
	Close	87.29	87.64	86.77	87.72	88.11	89.63	90.70	90.61	91.92	91.45	92.19	91.20	91.98	91.30	91.15	—
1984	High	91.23	91.47	90.60	90.44	90.06	90.51	90.66	90.57	90.47	90.82	90.78	90.48	90.18			
	Low	90.63	90.33	90.11	89.55	89.30	89.57	90.32	90.13	90.00	90.32	90.28	89.79	89.77			
	Close	91.23	90.34	90.39	89.60	89.59	90.46	90.39	90.39	90.44	90.72	90.38	89.97	89.94			
1985	High	88.92															
	Low	88.46															
	Close	88.52															

Source: International Monetary Market (Chicago) T.321

U.S. Industrial Production Index[1] (Seasonally Adjusted) 1967 = 100

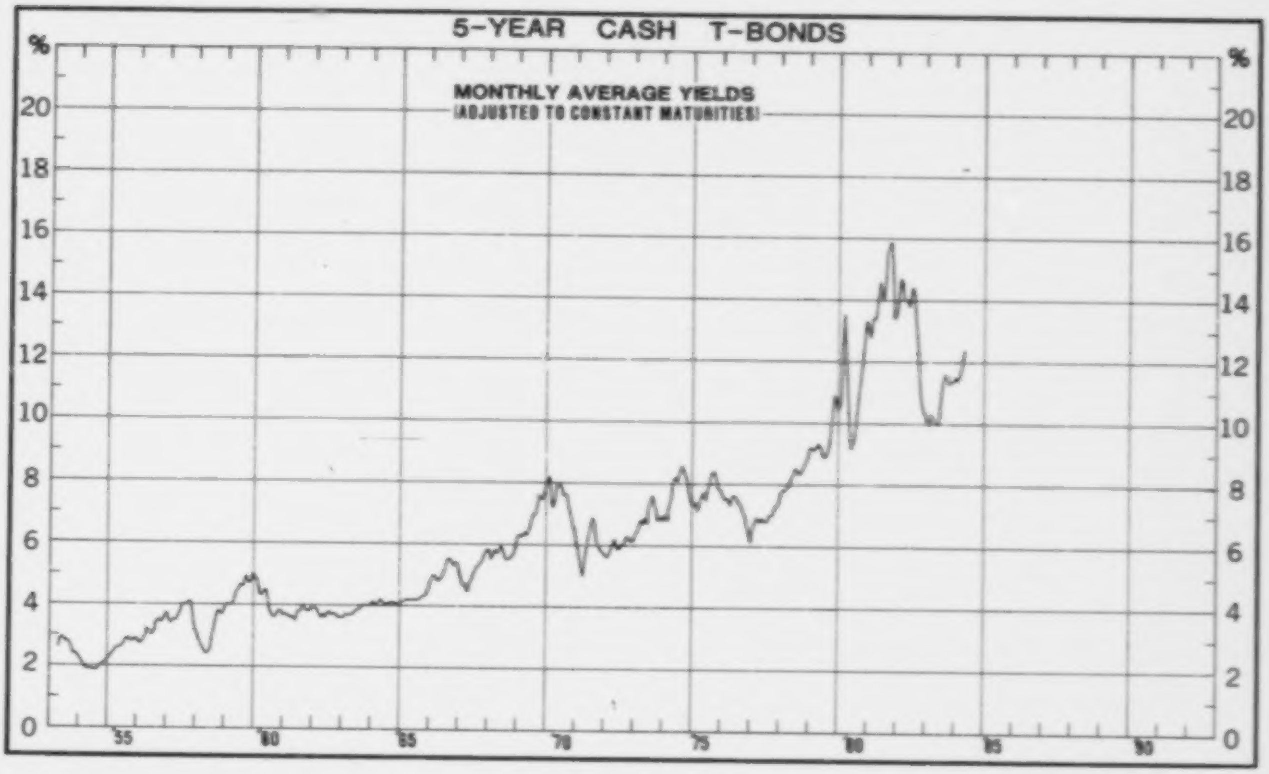
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	126.3	127.8	128.5	128.5	129.6	129.9	130.4	130.4	131.1	131.4	131.6	131.3	129.8
1974	129.9	129.6	130.0	129.9	131.3	131.9	131.8	131.7	131.8	129.5	124.9	119.3	129.3
1975	115.2	112.7	111.7	112.6	113.7	116.4	118.4	121.0	122.1	122.2	123.5	124.4	117.8
1976	126.1	128.1	128.7	129.0	130.1	130.7	131.2	132.0	131.3	131.3	132.6	133.6	130.5
1977	133.7	134.5	136.3	137.1	138.0	138.9	139.0	139.3	139.6	140.1	140.3	140.5	138.2
1978	140.0	140.3	142.1	144.4	144.8	146.1	147.1	148.0	148.6	149.7	150.6	151.8	146.1
1979	152.0	152.5	153.5	151.1	152.7	153.0	153.0	152.1	152.7	152.7	152.3	152.5	152.5
1980	153.0	152.8	152.1	148.2	143.8	141.4	140.3	142.2	144.4	146.6	149.2	150.4	147.0
1981	151.4	151.8	152.1	151.9	152.7	152.9	153.9	153.6	151.6	149.1	146.3	143.4	151.0
1982	140.7	142.9	141.7	140.2	139.2	138.7	138.8	138.4	137.3	135.7	134.9	135.2	138.6
1983[2]	137.4	138.1	140.0	142.6	144.4	146.4	149.7	151.8	153.8	155.0	155.3	156.2	147.6
1984[2]	158.4	160.0	160.7										

[1] Total Index of the Federal Reserve Index of Quantity Output. [2] Preliminary. *Source: Federal Reserve System* T.318

U.S. Federal Funds Rate In Percent

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1975	7.13	6.24	5.54	5.49	5.22	5.55	6.10	6.14	6.24	5.82	5.22	5.20	5.82
1976	4.87	4.77	4.84	4.82	5.29	5.48	5.31	5.29	5.25	5.03	4.95	4.65	5.05
1977	4.61	4.68	4.69	4.73	5.35	5.39	5.42	5.90	6.14	6.47	6.51	6.56	5.54
1978	6.70	6.78	6.79	6.89	7.36	7.60	7.81	8.04	8.45	8.96	9.76	10.03	7.93
1979	10.07	10.06	10.09	10.01	10.24	10.29	10.47	10.94	11.43	13.77	13.18	13.78	11.19
1980	13.82	14.13	17.19	17.61	10.98	9.47	9.03	9.61	10.87	12.81	15.85	18.90	13.36
1981	19.08	15.93	14.70	15.72	18.52	19.10	19.04	17.82	15.87	15.08	13.31	12.37	16.38
1982	13.22	14.78	14.68	14.94	14.45	14.15	12.59	10.12	10.31	9.71	9.20	8.95	12.26
1983	8.68	8.51	8.77	8.80	8.63	8.98	9.37	9.56	9.45	9.48	9.34	9.47	
1984	9.56	9.59	9.91	10.30									

Source: U.S. Dept. of Commerce. T.318a



U.S. Money Supply M1 in 1972 $ In Billions of Dollars

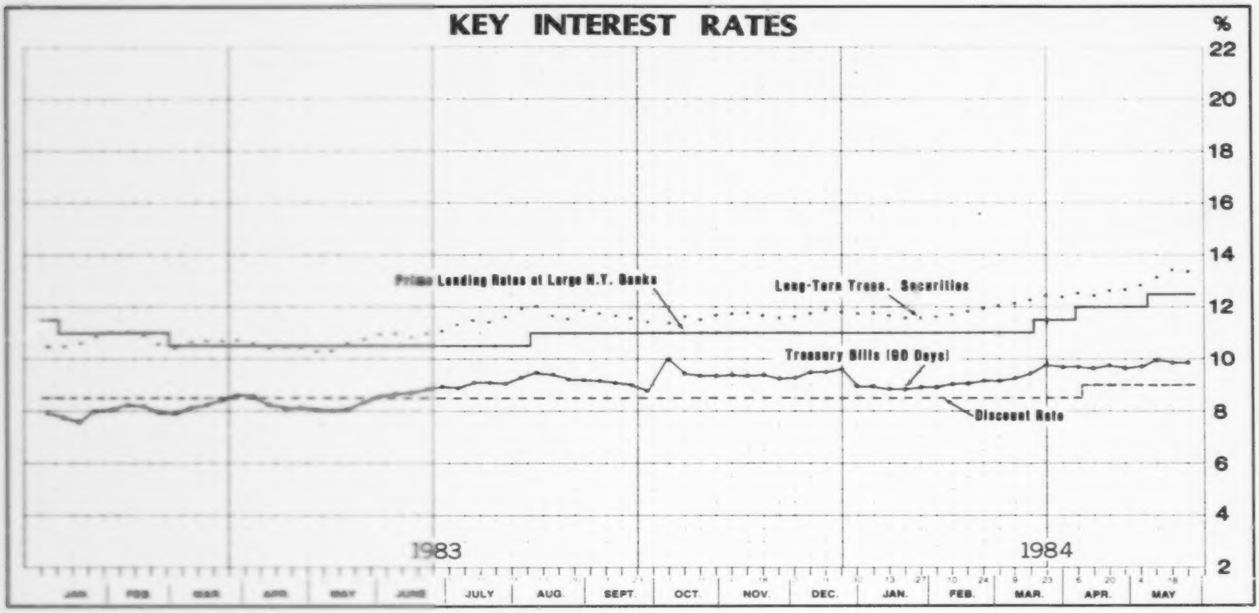
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	226.6	225.4	226.1	224.6	225.7	227.3	225.5	225.8	225.5	223.7	224.1	222.3	225.2
1976	222.5	223.9	224.1	224.5	225.0	224.1	223.8	223.9	223.7	224.9	225.0	225.3	224.2
1977	221.2	220.9	221.0	221.5	221.2	220.9	221.2	221.2	221.8	222.6	222.8	223.1	221.6
1978	224.3	223.1	222.7	223.6	223.7	223.3	222.6	222.1	222.6	221.0	221.2	221.4	222.6
1979	222.4	220.8	220.6	221.9	219.6	219.7	219.3	218.3	216.8	215.0	213.4	211.9	218.3
1980	209.9	209.0	206.2	201.6	199.3	199.7	201.7	203.9	204.7	204.9	203.6	200.2	204.2
1981	200.3	199.1	200.4	203.7	200.2	198.4	196.6	195.8	193.7	193.9	194.2	195.5	197.6
1982	198.1	198.1	198.4	198.2	197.6	195.9	195.2	196.3	198.2	200.6	203.2	205.6	198.8
1983[1]	207.0	209.0	211.8	211.0	213.7	215.1	216.0	216.2	216.1	216.3	216.1	216.6	213.7
1984[1]	217.2	217.6	218.1										

[1] Preliminary. *M1*—This measure is currency, travelers checks, plus demand deposits at commercial banks and interest-earning checkable deposits at all depository institutions. *Source: Federal Reserve System* T.327

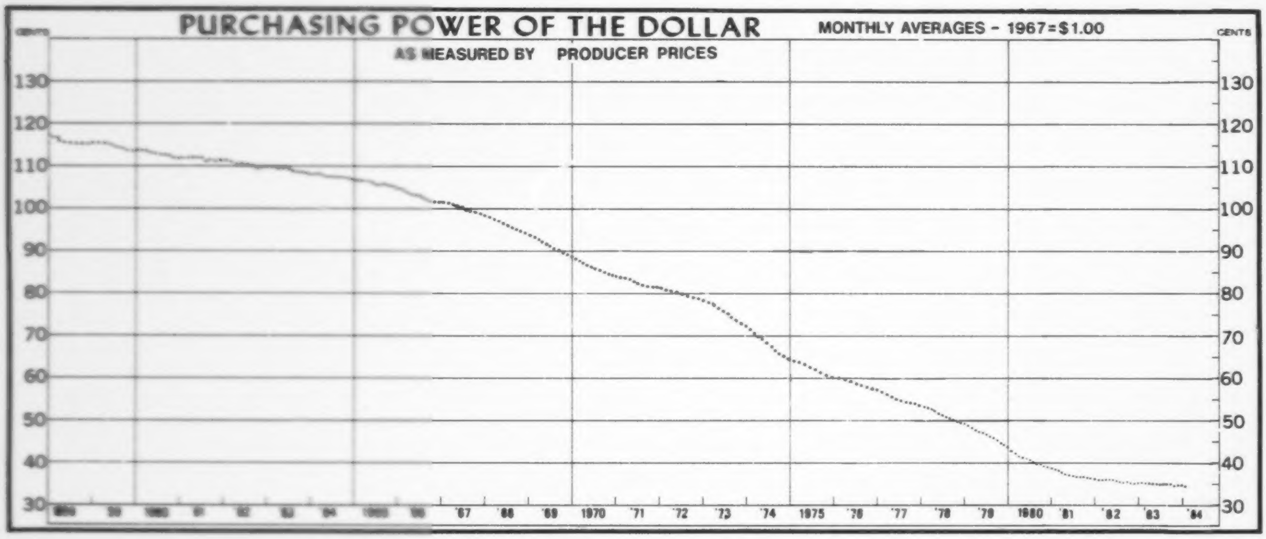
U.S. Money Supply M2 in 1972 $ In Billions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	728.1	731.3	737.5	742.8	751.0	758.1	759.2	763.2	764.1	763.5	766.8	768.0	752.8
1976	774.0	784.7	790.1	796.8	803.7	803.6	805.1	811.2	815.6	822.6	828.5	835.4	805.9
1977	840.1	841.9	845.1	848.3	852.7	853.7	856.1	859.2	861.7	865.3	866.5	868.1	854.9
1978	686.6	867.6	867.2	867.0	865.4	863.2	862.1	863.0	863.1	862.0	862.4	861.7	864.4
1979	860.7	857.4	856.8	857.0	853.9	853.2	850.7	848.9	845.5	838.7	833.0	827.7	848.6
1980	818.6	815.6	808.9	799.3	798.2	800.1	810.1	814.6	812.0	808.8	807.7	800.0	812.3
1981	798.4	796.8	803.1	810.1	808.1	806.1	802.8	804.9	798.9	789.3	793.1	796.4	803.6
1982	800.9	802.8	808.9	809.7	808.2	805.6	807.9	815.2	820.1	822.9	830.1	841.0	814.4
1983[1]	860.7	876.9	882.0	882.2	886.9	891.3	892.1	892.4	894.4	898.9	901.8	905.5	888.8
1984[1]	904.0	907.1	907.7										

[1] Preliminary. *M2*—This measure adds to M1 overnight repurchase agreements (RP's) issued by commercial banks and certain overnight Eurodollars (those issued by Caribbean branches of member banks) held by U.S. nonbank residents, general purpose and broker/dealer money market mutual fund shares (MMMF), and savings and small-denomination time deposits. *Source: Federal Reserve System* T.328



KEY INTEREST RATES



PURCHASING POWER OF THE DOLLAR MONTHLY AVERAGES - 1967=$1.00

AS MEASURED BY PRODUCER PRICES

U.S. Gross National Product, National Income, and Personal Income In Billions of Current Dollars[1]

	Gross National Product					National Income					Personal Income				
Year	I	II	III	IV	Annual Total	I	II	III	IV	Annual Total	I	II	III	IV	Annual Total
1975	1,455	1,499	1,564	1,598	1,529	1,157	1,189	1,243	1,272	1,215	1,205	1,238	1,274	1,305	1,255
1976	1,672	1,699	1,729	1,773	1,718	1,346	1,364	1,389	1,418	1,379	1,349	1,374	1,404	1,438	1,391
1977	1,839	1,894	1,951	1,989	1,918	1,474	1,524	1,576	1,612	1,546	1,476	1,514	1,558	1,604	1,538
1978	2,032	2,130	2,191	2,272	2,156	1,645	1,721	1,772	1,845	1,745	1,638	1,692	1,748	1,809	1,722
1979	2,336	2,378	2,455	2,503	2,418	1,907	1,941	1,994	2,025	1,967	1,872	1,917	1,982	2,034	1,951
1980	2,573	2,579	2,639	2,736	2,632	2,076	2,073	2,118	2,200	2,117	2,092	2,118	2,186	2,265	2,165
1981	2,867	2,913	3,005	3,032	2,954	2,296	2,337	2,423	2,436	2,373	2,338	2,394	2,491	2,517	2,435
1982[2]	3,021	3,070	3,091	3,110	3,073	2,420	2,449	2,459	2,474	2,450	2,528	2,563	2,591	2,632	2,579
1983[2]	3,172	3,272	3,362	3,437	3,311	2,583	2,613	2,687	2,772	2,648	2,658	2,714	2,762	2,835	2,742

[1] Seasonally adjusted at annual rates. [2] Preliminary. *Source: U.S. Dept. of Commerce* T.329

Iron and Steel

A preliminary U.S. Bureau of Mines estimate indicated that world mine production of iron ore in 1983 was about 4 percent below the 1982 production of 790.6 million long tons. The Soviet Union accounted for nearly 32 percent of estimated 1983 world production, followed by Brazil—13 percent; and Australia—11 percent. World iron ore production and trade continued low in 1983, reflecting depressed demand for iron and steel in most major industrialized countries. In addition, ocean freight rates remained low, and prices for most iron ores on the international market declined by 10 to 15 percent during 1983.

In the U.S., the iron ore industry continued to operate at less than half of production capacity in 1983, with most major mines closed for part of the year. Preliminary Bureau of Mines data for 12 months of 1983 indicated that U.S. mine production of iron ore increased 4 percent in 1983, to 38.0 million tons. It was estimated by the Bureau of Mines that domestic production of iron ore in 1984 would increase to 50 million tons, and that apparent consumption would be 68 million tons. Domestic mine shipments of ore totaled 44.7 million tons in 1983, up 21 percent from the 1982 level. Imports of iron ore, which usually account for 25 to 35 percent of domestic demand because of availability at relatively low cost, decreased by about 11 percent in 1983, to 13.3 million tons. U.S. exports of iron ore, on the other hand, increased 19 percent, to 3.8 million tons. Domestic consumption of iron ore by the iron and steel industry increased 11 percent in 1983, to 61.2 million tons. December 31, 1983 stocks of ore at U.S. receiving docks and consuming plants totaled 28.7 million tons, down 20 percent from the year-earlier level.

World pig iron production in 1983 was estimated by the U.S. Bureau of Mines to be only about one percent below the 500 million short tons produced in 1982, while raw steel production was estimated at 708 million tons, about the same as in 1982. While production of steel began to recover in the U.S., it continued to decline in the EEC and remained at a low level in Japan.

U.S. raw steel production capacity has declined over the past several years, from a maximum of about 160 million short tons in 1977 to 136 million tons by the end of 1983. Most of the loss in capacity has occurred in the major integrated companies. Annualized capacity utilization in the U.S. averaged less than 55 percent throughout much of 1983. While demand for steel by manufacturers of consumers goods such as automobiles and appliances increased, demand for steel for capital goods continued weak in 1983. The composite list price for steel increased slightly in 1983, but large discounts continued. Prices for sheet steel used in consumer goods strengthened in 1983.

Over the years, the so-called "minimills" have increased their share of the U.S. steel market at the expense of the integrated major producers. These mills typically use electric furnaces and continuous casting to produce a limited range of products utilizing steel scrap as the primary raw material. Compared with the integrated mills, the minimills frequently have such advantages as lower capital cost, locations near markets and scrap supply, and often lower labor costs. Minimills are dependent on the availability of scrap metal at prices that enable them to maintain their cost advantage; and because of the importance of electric power to the production of steel in electric arc furnaces, rising electricity costs could cancel out the cost advantage of minimill production, according to a U.S. Bureau of Mines study.

The decline in production capacity of the major integrated U.S. steel companies has been accompanied by a rise in the share of total U.S. consumption supplied by imported steel. Imports of steel declined in 1983 from the 1982 level, but they continued to supply a significant portion of the generally weak U.S. market and provided strong price competition. Imports from the European Economic Community (EEC) and Japan, the two leading sources of imported steel, were considerably lower than in 1982, but part of this decrease was made up by higher imports from countries with growing steel industries such as Brazil and the Republic of Korea.

U.S. steel producers continued to seek U.S. government protection from imports to allow the industry to adjust to increased foreign competition or because of alleged dumping, or foreign subsidies. After a steel trade agreement was signed with the EEC in 1982, most of the new carbon steel trade cases were against the increasing imports from developing countries. In July 1983, either quotas or higher tariffs were imposed on imports of five classes of stainless or tool steel. The quotas were replaced, in part, later in 1983 by orderly marketing agreements negotiated with several countries.

End use of domestic iron and steel consumption in 1983 was estimated as follows: construction—32 percent; transportation—25 percent; machinery—18 percent; appliances and equipment—7 percent; other uses—18 percent.

Average Wholesale Prices of Iron and Steel in the U.S. In Dollars Per Net Ton

	Pig Iron				No. 1 Heavy Melting Steel Scrap		Cents Per Pound at Pittsburgh								
									Steel Bars						
Year	Bessemer[2] Neville Isl., Pa.	Iron Age Composite	No. 2 F.O.B. Birmingham	Steel Billets Pitts.	Pitts.	Chicago	Tin Plate (¼ Lb.)	Hot Rolled Sheet[3]	Hot Rolled	Cold Finished	Structural Shapes	Carbon Steel Plates	Cold Rolled Strip	Galvanized Sheets	Wire Rods-Chi. $Gr. Ton
1977	184.03	189.57	184.33	246.15	66.42	60.21	16.0–19.1	13.75	12.68	20.15	13.85	14.64	20.33	18.05	14.56
1978	190.00	198.31	191.00	282.88	78.48	73.98	18.0–20.4	15.36	14.01	22.80	15.73	16.53	22.49	20.21	16.80
1979	190.00	203.00	191.00	302.00	100.77	96.69	19.1–23.4	17.05	16.20	25.07	17.36	18.46	24.13	22.40	17.22
1980	200.83	203.00	191.00	348.70	95.48	86.70	23.3–24.9	18.21	19.59	28.95	18.98	20.57	27.15	23.56	19.09
1981	209.67	204.66	205.33	358.00	100.57	91.76	24.9–26.7	20.13	16.95	29.45	21.32	23.04	30.23	26.05	20.27
1982[1]	213.00	213.00	213.00	358.00	66.47	57.78	26.2–22.8	20.80	17.23	31.06	22.90	24.25	29.75	26.90	20.48
1983[4]		213.00			76.99	72.42									

[1] Preliminary. [2] Prior to 1974 prices are F.O.B. Mahoning Valley. [3] 10 gauge. [4] Estimate. *Source: American Metal Market* T.337

World Production of Raw Steel (Ingots & Castings) In Millions of Short Tons

Year	Belgium	Brazil	Canada	Czechoslovakia	China	France	Italy	Japan	Luxembourg	Poland	Spain	Sweden	United Kingdom	United States	USSR	W. Germany	World Total
1971	13.7		12.2	13.3	23.0	25.2	19.2	97.6	5.8			5.8	26.6	120.4	133.0	44.4	640.5
1972	16.0		13.1	14.0	25.0	26.5	21.8	106.8	6.0			5.8	27.9	133.2	138.4	48.2	692.7
1973	17.1		14.8	14.5	30.0	27.8	23.1	131.5	6.5	15.5		6.2	29.4	150.8	144.9	54.6	769.1
1974	17.9	8.3	15.0	15.0	30.0	29.8	26.2	129.1	7.1	16.0		6.6	24.7	145.7	150.1	58.7	780.4
1975	12.8	9.2	14.4	15.8	28.0	23.7	24.1	112.8	5.1	16.5		6.2	22.3	116.6	155.8	44.6	710.1
1976	13.4	10.1	14.7	16.2	22.6	25.6	25.8	118.4	5.0	17.2	12.1	5.7	24.6	128.0	159.6	46.8	742.4
1977	12.4	12.3	15.0	16.6	26.2	24.4	25.7	112.9	4.8	19.7	12.2	4.4	22.5	125.3	161.7	43.0	741.6
1978	13.9	13.3	16.4	16.9	35.0	25.2	26.8	112.6	5.3	21.2	12.4	4.8	22.4	137.0	166.9	45.5	787.9
1979	14.8	15.3	17.7	16.3	38.0	25.8	26.7	123.2	5.5	21.2	13.6	5.1	23.6	136.3	164.4	50.8	821.1
1980	13.6	16.9	17.5	16.8	40.9	25.5	29.2	122.8	5.1	21.5	13.9	4.7	12.4	111.8	163.1	48.3	787.1
1981[1]	13.5	14.6	16.3	16.8	39.2	23.4	27.3	112.1	4.2	17.3	14.2	4.2	17.2	120.8	163.6	45.9	777.4
1982[1]	10.9	14.3	13.9	16.5	41.0	20.3	26.4	109.7	3.9	16.0	14.5	4.3	15.1	74.6	162.9	39.6	708.3
1983[2]					41.0			108.0						84.6	168.0		708.0

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

T.330

Salient Statistics of Steel in the United States In Millions of Short Tons

Year	Value of		Production									Shipments of Steel Products	
			Steel Ingots and Castings						Alloy Steel[2]				
				Open Hearth									
	Exports (Million $)	Imports (Million $)	Basic Oxygen	Acid	Basic	Bessemer	Electric[3]	Total Production	Stainless	Other	Total Production	Domestic Consumption	Export
1971	945	2,803	63.9	[5]	35.6	[5]	20.9	120.4	1.3	12.2	13.5	83.5	3.5
1972	1,006	2,992	74.6	[5]	34.9	[5]	23.7	133.2	1.6	14.0	15.6	88.3	3.5
1973	1,581	3,045	83.3	[5]	39.8	[5]	27.8	150.8	1.9	16.2	18.1	106.4	5.0
1974	3,012	5,583	81.6	[5]	35.5	[5]	28.7	145.7	2.2	17.0	19.2	102.5	7.0
1975	2,970	4,507	71.8	[5]	22.2	[5]	22.7	116.6	1.1	15.2	16.3	76.0	4.0
1976	2,462	4,584	79.9	[5]	23.5	[5]	24.6	128.0	1.7	14.3	16.0	86.4	3.0
1977	2,284	5,936	77.4	[5]	20.0	[5]	27.9	125.3	1.9	15.3	17.2	88.0	3.1
1978	2,285	7,658	83.5	[5]	21.3	[5]	32.2	137.0	2.0	18.2	20.2	94.6	3.3
1979	2,804	7,823	83.3	[5]	19.2	[5]	33.9	136.3	2.1	18.0	20.1	98.3	2.0
1980	3,728	7,792	67.6	[5]	13.1	[5]	31.2	111.8	1.7	15.4	17.1	81.3	2.6
1981	3,649	11,286	73.2	[5]	13.5	[5]	33.2	119.9	1.7	17.6	19.3	85.2	1.8
1982[1]	2,734	10,394	45.3	[5]	6.1	[5]	21.5	74.6	1.2	9.0	10.2	60.8	.8
1983[4]			52.0	[5]	6.0	[5]	26.6	84.6	1.8	9.1	10.9	67.6	.5

[1] Preliminary. [2] Included under total steel production. [3] Includes crucible steels. [4] Estimate. [5] No longer published. *Sources: American Iron & Steel Institute; U.S. Bureau of Mines*

T.331

U.S. Production of Steel Ingots, Rate of Capability Utilization[1] In Percent[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	104.3	111.4	117.0	120.2	119.6	109.9	92.0	53.4	73.4	76.0	77.0	81.3	94.7
1972	92.6	98.7	107.3	110.8	110.5	105.0	95.7	100.4	104.4	107.9	109.0	109.9	104.5
1973	114.5	119.1	121.1	122.3	121.9	119.4	113.8	112.7	117.0	119.2	120.4	117.7	118.5
1974	117.8	118.8	118.1	119.0	118.0	116.5	112.5	109.6	113.3	116.8	111.1	101.4	114.4
1975[2]	90.4	93.8	93.4	84.9	75.9	69.6	65.1	67.3	74.7	69.0	67.4	66.2	76.2
1976	74.4	80.1	85.4	88.4	90.8	89.7	84.8	82.8	80.4	75.8	72.2	67.8	80.9
1977	66.8	72.1	81.2	83.3	88.6	84.9	76.7	77.2	77.2	77.7	75.0	74.7	78.4
1978	77.2	80.1	83.1	88.5	91.5	91.1	85.1	86.3	88.6	89.8	89.4	87.7	86.8
1979	83.5	87.9	94.5	93.4	94.8	93.7	89.9	86.0	82.8	84.4	80.6	78.0	87.8
1980	82.7	85.3	88.4	83.0	69.6	58.4	53.1	54.4	62.6	72.2	79.5	77.8	72.8
1981	79.9	83.7	88.6	87.7	86.2	81.5	77.6	77.3	75.9	68.7	62.8	58.6	78.3
1982	59.3	60.9	61.7	55.2	50.9	47.7	43.8	42.4	41.9	40.2	35.9	34.0	48.4
1983[3]	43.4	49.0	55.5	58.9	57.9	56.5	54.3	55.1	57.8	60.2	58.7	54.7	55.2
1984[3]													

[1] Based on tonnage capability to produce raw steel for a full order book. [2] Data prior to 1975 are based on INDEX OF PRODUCTION 1967 = 100. [3] Preliminary. *Source: American Iron and Steel Institute*

T.332

United States Production of Steel Ingots In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	11,274	10,874	12,645	12,565	12,920	11,491	9,942	5,774	7,678	8,211	8,053	8,784	120,443
1972	10,001	9,980	11,588	11,588	11,936	10,980	10,341	10,842	10,913	11,657	11,398	11,878	133,241
1973	12,373	11,626	13,088	12,788	13,174	12,488	12,290	12,182	12,229	12,876	12,586	12,722	150,799
1974	12,726	11,598	12,758	12,442	12,752	12,185	12,155	11,837	11,849	12,617	11,615	10,960	145,720
1975	11,584	10,862	11,980	10,667	9,864	8,744	8,371	8,648	9,295	9,214	8,709	8,846	116,642
1976	9,835	9,907	11,294	11,439	12,136	11,605	11,400	11,128	10,463	10,295	9,494	9,215	128,000
1977	9,089	8,859	11,049	11,167	12,201	11,384	10,319	10,393	10,050	10,442	9,748	10,031	125,333
1978	10,301	9,643	11,083	11,528	12,320	11,861	11,388	11,550	11,467	12,105	11,654	11,812	137,031
1979	11,105	10,562	12,576	12,196	12,789	12,230	11,821	11,309	10,541	10,810	9,997	9,996	136,341
1980	10,701	10,332	11,439	10,658	9,226	7,501	6,796	7,018	7,767	9,442	10,057	10,180	111,835
1981	10,590	10,028	11,744	11,243	11,423	10,451	10,160	10,120	9,618	9,003	7,962	7,672	120,828
1982	7,737	7,178	8,049	7,006	6,678	6,050	5,719	5,538	5,299	5,262	4,546	4,456	74,577
1983[1]	5,570	5,676	7,127	7,292	7,412	6,993	6,921	7,020	7,134	7,692	7.263	6,991	83,091
1984[1]	7,970												

[1] Preliminary. *Source: American Iron and Steel Institute* T.333

Shipments of Steel Products[1] by Market Classifications in the United States In Thousands of Net Tons

Year	Appliances, Utensils & Cutlery	Automotive	Containers & Packaging	Construction	Contractors Products	Electrical Mach. & Equipment	Export	Machinery, Industrial Equip. & Tools	Oil and Gas	Rail Transportation	Steel for Converting & Processing[2]	Steel Service Center & Distributors	All Other[3]	Total Shipments
1971	2,148	17,483	7,212	9,541	4,946	2,593	2,433	4,903	1,760	3,004	3,593	16,184	11,238	87,038
1972	2,362	18,217	6,616	9,299	5,055	2,824	2,555	5,396	278	2,730	4,199	18,598	13,676	91,805
1973	2,747	23,217	7,811	11,405	6,459	3,348	3,138	6,351	409	3,228	4,714	22,705	15,898	111,430
1974	2,412	18,972	8,235	12,440	6,215	3,242	3,961	6,468	521	3,414	4,486	23,206	15,900	109,472
1975	1,653	15,214	4,589	8,767	3,927	2,173	1,755	5,173	601	3,152	3,255	15,622	14,076	79,957
1976	1,961	21,334	6,914	7,406	4,543	2,670	1,838	5,188	2,652	3,027	4,141	14,662	13,111	89,447
1977	2,129	21,490	6,714	7,553	4,500	2,639	1,076	5,566	3,650	3,238	3,679	15,346	13,567	91,147
1978	2,094	21,253	6,595	9,612	3,480	2,811	1,224	5,992	4,140	3,549	4,612	17,333	15,240	97,935
1979	2,141	18,624	6,770	10,058	4,021	2,821	2,010	6,027	3,738	4,127	4,728	18,263	16,934	100,262
1980	1,726	12,156	5,549	12,149	3,362	2,441	2,597	4,566	5,368	3,178	3,881	16,174	10,706	83,853
1981	1,775	13,154	5,292	8,446	3,230	2,600	1,844	4,624	6,238	2,162	3,338	17,637	16,672	87,014
1982	1,337	9,288	4,470	6,283	2,287	2,003	832	2,584	2,745	1,020	3,222	13,067	12,429	61,567
1983	1,618	12,320	4,532	7,271	2,703	2,335	544	2,486	1,296	937	1,211	16,710	13,621	67,584

[1] All grades including carbon, alloy & stainless steel. [2] Net total after deducting shipments to reporting companies for conversion or resale. [3] Includes agricultural; bolts, nuts, rivets & screws; forgings (other than automotive); shipbuilding & marine equipment; aircraft; mining, quarrying & lumbering; other domestic & commercial equipment machinery; ordnance & other direct military; & shipments of non-reporting companies. *Source: American Iron and Steel Institute* T.334

Net Shipments of Steel Products in the United States

(All Grades, Including Carbon, Alloy & Stainless Steel) In Thousands of Net Tons

Year	Cold Finished Bars	Rails & Accessories	Wire & Wire Products	Tin Mill Products	Plates	Sheets & Strip	Hot Rolled Bars	Pipe & Tubing	Shapes & Steel Piling	Reinforcing Bars	Hot Rolled Sheets	Cold Rolled Sheets	Semi-Finished	Alloy	Stainless
1971	1,378	1,564	2,791	6,811	7,939	35,574	8,179	7,574	5,666	4,521	11,760	14,898	4,962	7,014	718
1972	1,675	1,601	2,952	6,135	7,553	39,862	9,299	7,609	5,656	4,454	14,036	16,123	4,917	7,777	855
1973	2,161	1,689	3,245	7,316	9,678	49,370	10,763	9,133	7,081	5,135	16,886	20,377	5,749	9,372	1,134
1974	2,251	1,785	3,171	7,528	10,919	44,991	11,061	9,844	7,210	5,089	15,774	18,275	5,509	10,179	1,345
1975	1,486	1,965	2,154	5,587	8,761	30,763	8,146	8,228	5,121	3,666	11,222	12,841	3,911	8,436	757
1976	1,618	2,017	2,461	6,436	7,160	42,303	8,664	6,265	4,187	3,876	15,090	18,265	4,384		
1977	1,792	1,863	2,401	6,382	7,538	41,586	9,251	7,484	4,379	4,234	14,484	17,627	4,055	8,760	1,118
1978	2,084	1,703	2,510	6,100	8,601	43,609	8,758	8,399	5,027	4,704	15,447	17,821	5,070	10,557	1,191
1979	2,245	2,026	2,449	6,310	9,035	43,507	8,493	8,242	5,596	5,303	15,995	17,284	5,496	11,023	1,361
1980	1,585	1,797	1,768	5,709	8,080	33,853	5,961	9,097	5,207	4,683	12,116	13,313	5,342	9,368	1,127
1981	1,620	1,458	1,694	4,927	7,397	36,924	6,628	10,286	4,903	4,371	13,451	14,396	5,598	10,595	1,163
1982	1,015	782	1,308	4,321	4,146	7,730[2]	4,757	5,026	3,563	4,049	9,052	11,132	3,693	6,726	894
1983[1]	1,179	884	1,359	4,308	3,816	5,793[2]	5,129	3,242	3,622	4,275	11,619	13,781	3,861	6,154	1,137

[1] Preliminary. [2] Excludes Hot & Cold rolled sheets. Shown elsewhere. *Source: American Iron & Steel Institute* T.335

U.S. Foreign Trade of Iron & Steel Products In Thousands of Short Tons

Year	U.S. Imports of Iron & Steel Pdts.						Exports of Iron & Steel Pdts. from U.S.					
	Steel Mill Pdts.	Other Steel Pdts.	Iron Pdts. & Ferro-alloys	Grand Total Quantity	Grand Total Mil. $	Iron & Steel Scrap	Steel Mill Pdts.	Other Steel Pdts.	Iron Pdts. & Ferro-alloys	Grand Total Quantity	Grand Total Mil. $	Iron & Steel Scrap
1975	12,012	657	1,250	13,919	5,257	305	2,953	618	575	4,146		9,608
1976	14,285	652	1,357	16,294	5,082	507	2,519	831	607	3,865		8,120
1977	19,307	985	1,366	21,658	6,839	625	1,913	765	539	3,218		6,175
1978	21,135	797	96	22,027	7,658	794	2,421	413	436	3,271	2,285	9,038
1979	17,518	787	123	18,428	7,823	760	2,818	374	208	3,400	2,804	11,054
1980	15,495	753	107	16,355	7,792	582	4,101	407	221	4,729	3,728	11,168
1981	19,898	826	79	20,818	11,286	556	2,904	444	209	3,557	3,649	6,415
1982[1]	16,536	745	104	17,385	10,394	500	1,842	342	183	2,367	2,734	6,872
1983[2]				16,400						1,600		7,700

[1] Preliminary. [2] Estimate. *Source: U.S. Bureau of Mines; American Metal Market* T.336

World Production of Pig Iron (Excludes Ferro-Alloys) In Millions of Short Tons

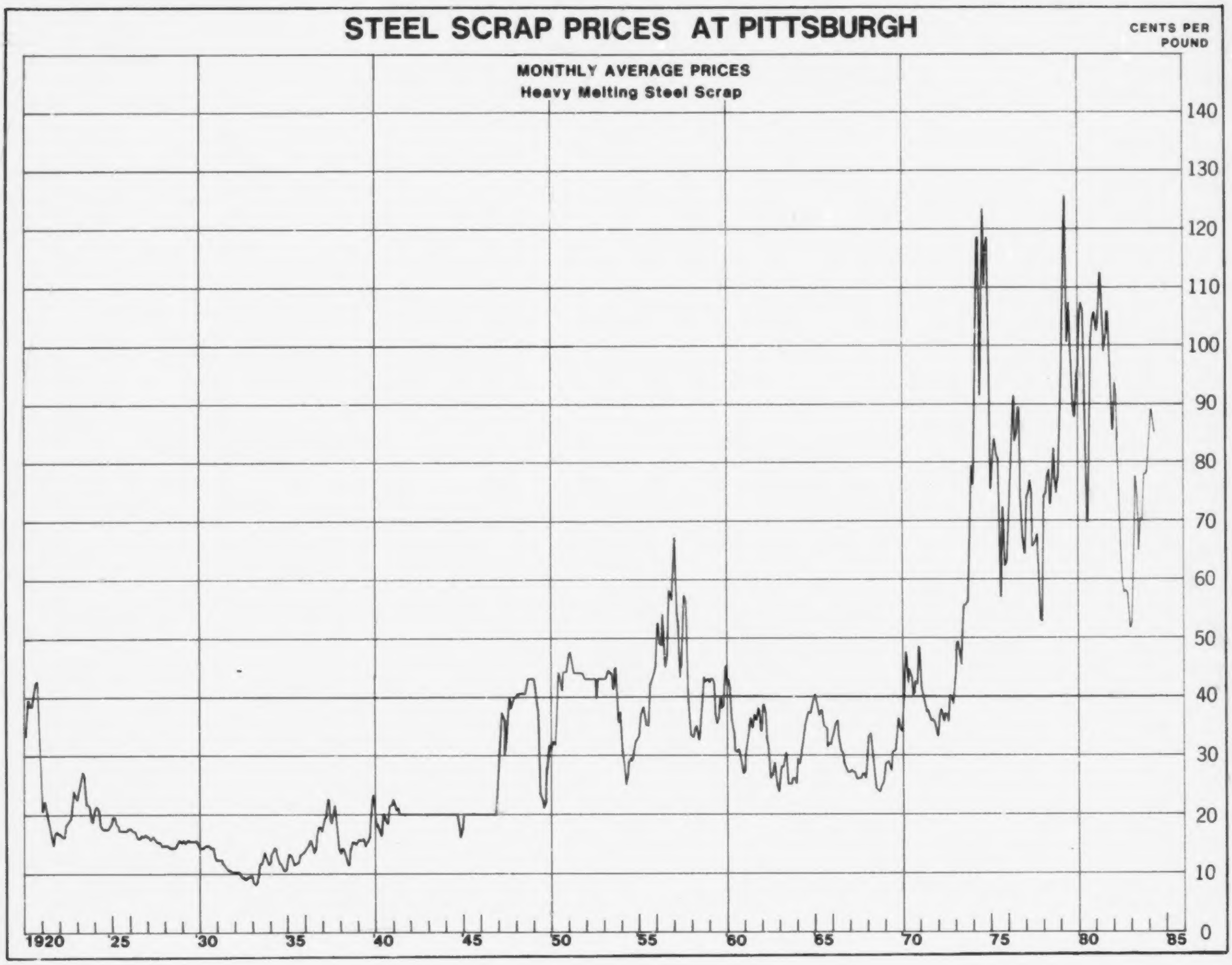
Year	Australia	Belgium	Canada	Czech.	France	W. Germany	India	Italy	Japan	Luxembourg	Poland	China	USSR	United Kingdom	United States	World Total
1973	8.4	14.0	10.5	9.4	21.8	40.2	8.3	11.1	99.2	5.6	8.4	31.0	104.7	18.4	101.3	552.4
1974	8.0	14.4	10.4	9.8	24.2	43.9	8.1	12.9	99.7	6.0	8.4	33.0	109.0	15.6	95.5	564.2
1975	8.2	10.0	10.1	10.2	19.3	32.9	9.1	12.5	95.8	4.3	8.4	35.0	112.4	13.3	79.7	528.3
1976	8.2	10.9	10.8	10.4	20.6	34.9	10.7	12.8	95.4	4.1	9.0	31.7	115.1	15.1	86.8	548.6
1977	7.4	9.8	10.6	10.7	19.7	31.6	10.8	12.6	94.7	3.9	10.5	27.6	117.4	13.5	81.5	537.4
1978	8.1	11.3	11.4	11.0	20.0	27.4	10.4	12.5	86.6	4.1	12.2	38.3	122.0	12.7	87.7	557.4
1979	8.6	11.9	12.0	10.5	20.9	38.8	9.6	12.5	92.4	4.2	12.1	40.5	120.1	14.2	87.0	585.6
1980	7.7	11.6	12.0	10.8	20.6	37.3	9.4	13.4	95.9	3.9	12.8	41.9	118.2	7.1	68.7	568.4
1981[1]	7.5	10.8	10.7	10.9	18.7	35.1	10.4	13.5	88.2	3.2	10.3	37.7	116.6	10.4	73.8	557.3
1982[1]	6.6	8.6	8.8	10.5	16.6	30.2	10.6	12.7	85.6	2.9	9.9	39.1	118.8	9.1	43.3	500.0
1983[2]									83.0			39.0	122.0		51.1	495.0

[1] Preliminary. [2] Estimated. *Source: Bureau of Mines* T.338

U.S. Pig Iron Production (Excluding Production of Ferro-Alloys) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	8,199	7,756	8,627	8,490	8,809	8,468	8,516	8,282	8,087	8,588	8,402	8,609	100,837
1974	8,563	7,804	8,386	8,233	8,387	8,185	8,337	7,872	7,713	8,187	7,250	6,731	95,670
1975	7,371	7,135	8,071	7,432	6,990	6,239	5,968	6,031	6,245	6,292	5,981	6,234	79,923
1976	6,636	6,754	7,519	7,601	8,116	7,874	7,999	7,751	6,995	6,969	6,382	6,272	86,870
1977	5,985	5,827	7,174	7,382	7,962	7,530	7,008	6,763	6,566	6,636	6,121	6,419	81,328
1978	6,390	5,971	6,894	7,189	7,936	7,754	7,637	7,518	7,391	7,809	7,533	7,658	87,679
1979	7,064	6,636	7,953	7,726	8,277	8,026	7,799	7,351	6,762	6,779	6,258	6,372	87,003
1980	6,583	6,357	7,115	6,677	5,906	4,664	4,222	4,360	4,596	5,621	6,132	6,489	68,721
1981	6,603	6,108	7,193	6,755	6,938	6,408	6,268	6,259	5,889	5,419	4,782	4,750	73,570
1982	4,489	4,169	4,622	3,967	3,904	3,595	3,516	3,277	3,160	3,077	2,648	2,712	43,136
1983[1]	3,192	3,264	4,206	4,333	4,376	4,090	4,213	4,245	4,159	4,317	4,119	4,084	48,598
1984[1]	4,310												

[1] Preliminary. *Source: American Iron and Steel Institute* T.341



STEEL SCRAP PRICES AT PITTSBURGH

Wholesale Price of No. 1 Heavy Melting Steel Scrap at Chicago In Dollars Per Gross Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	42.85	43.76	36.89	33.60	34.35	30.89	28.00	28.48	32.45	32.29	29.50	28.76	33.49
1972	31.50	33.58	35.89	34.50	34.50	34.55	35.50	37.50	37.50	37.50	37.50	41.23	35.94
1973	45.00	48.66	45.55	44.17	48.41	51.00	51.00	51.41	56.45	70.36	86.55	88.90	57.28
1974	87.18	114.58	125.64	132.34	100.75	115.25	137.72	119.68	113.90	114.00	107.43	83.67	112.68
1975	79.91	82.61	81.14	83.77	76.14	64.95	54.00	68.41	77.33	64.39	60.08	63.46	71.36
1976	71.67	74.90	85.04	94.96	86.45	86.86	90.67	80.95	68.90	62.00	62.00	65.14	77.46
1977	69.00	69.00	69.65	70.79	64.62	58.36	57.00	57.00	55.00	49.00	43.95	59.26	60.21
1978	71.00	71.00	71.48	76.00	70.32	72.73	76.63	74.48	69.00	69.45	79.35	86.35	73.98
1979	93.00	103.00	121.73	110.10	91.91	106.62	98.62	89.96	86.00	86.22	91.00	91.28	96.69
1980	96.14	99.00	97.00	90.54	69.62	62.24	67.45	77.95	87.24	92.22	97.29	103.68	86.70
1981	95.00	91.11	105.14	107.55	97.50	88.00	88.45	97.76	92.52	82.64	75.00	74.41	91.76
1982	83.00	78.63	69.78	63.86	58.30	51.77	49.00	51.73	48.95	47.86	45.00	45.48	57.78
1983	56.14	67.00	77.70	70.33	65.00	70.52	70.08	74.00	78.00	78.00	78.30	84.00	72.42
1984	88.29	89.00	87.09	85.14									

Source: American Metal Market T.339

Consumption of Pig Iron in the U.S., by Type of Furnace or Equipment In Thousands of Net Tons

Year	Open Hearth	Bessemer	Electric	Cupola	Air	Basic Oxygen Concentrates	Air & Other Furnaces	Direct Castings	Total
1972	22,375	[3]	961	2,264	139	60,233	254	[3]	86,226
1973	25,477	[3]	1,379	2,276	57	68,027	402	[3]	97,618
1974	22,507	[3]	1,220	2,123	[3]	66,614	632	3,697	96,792
1975	14,554	[3]	1,019	1,362	[3]	59,210	483	3,010	79,638
1976	15,410	[3]	638	1,197	[3]	66,138	406	3,255	87,045
1977	12,531	[3]	993	1,241	[3]	63,877	354	3,007	82,003
1978	13,444	[3]	1,440	1,056	[3]	69,028	398	3,055	88,420
1979	12,865	[3]	905	1,026	[3]	68,526	397	3,738	87,458
1980	8,606	[3]	855	698	[3]	56,414	299	2,182	69,053
1981	8,867	[3]	583	685	[3]	62,162	254	2,489	75,040
1982[1]	3,635	[3]	496	481	[3]	38,553	141	1,102	44,409
1983[2]									49,213

[1] Preliminary. [2] Estimate. [3] Included in "Other Furnaces." *Source: Bureau of Mines* T.340

Salient Statistics of Ferrous Scrap & Pig Iron in the U.S. In Millions of Short Tons

	Consumption: Ferrous Scrap & Pig Iron Charged To															
	Mfg. of Pig Iron & Steel Ingots & Castings			Iron Foundries & Misc. Users				All Uses					Stocks—Dec. 31 Ferrous Scrap & Pig Iron at Consumers'		
Year	Scrap	Pig Iron	Total	Scrap	Pig Iron	Total	Mfg. of Steel Castings (Scrap)	Ferr. Scrap	Pig Iron	Grand Total	Imports of Scrap[2]	Exports of Scrap[3]	Scrap	Pig Iron	Total Stocks
1972	73.4	84.0	157.2	17.3	2.1	19.4	2.7	93.4	89.1	182.5	.3	7.2	8.2	1.7	9.8
1973								103.6	99.8	203.4	.3	10.9	7.1	1.2	8.3
1974	81.1	92.8	173.9	21.1	3.9	25.0	3.3	105.5	96.8	202.3	.2	8.5	8.4	.8	9.2
1975	62.8	76.8	139.6	16.3	2.7	10.0	3.2	82.3	79.6	161.9	.3	9.4	8.8	1.4	10.2
1976	68.4	84.2	152.6	18.6	2.8	21.4	2.9	89.9	87.0	176.9	.5	7.9	10.0	1.5	11.5
1977	69.3	79.4	148.3	20.0	2.6	22.6	2.9	92.2	82.0	174.2	.6	5.9	9.2	1.3	10.5
1978	76.3	85.7	162.0	19.9	2.7	22.6	3.0	99.2	88.4	187.6	.8	9.0	8.3	.9	9.2
1979	77.2	84.7	161.9	18.5	2.7	21.2	3.2	98.9	87.5	186.4	.8	11.1	8.7	.9	9.6
1980	66.6	67.1	133.7	14.3	1.9	16.2	2.9	83.7	69.1	152.8	.6	11.2	8.0	.9	8.9
1981	68.3	73.0	143.6	14.2	2.0	16.2	2.6	85.1	75.0	162.1	.6	6.4	8.1	.9	9.0
1982[1]	43.7	43.3	87.0	10.9	1.1	12.0	1.8	56.4	44.4	100.8	.5	6.8	6.4	.6	7.0
1983[4]								59.9	49.2	109.1	.6	7.0	5.9	.5	6.4

[1] Preliminary. [2] Including tinplate scrap. [3] Excluding tinplate circles, strips, cobbles, etc. [4] Estimate. *Source: Bureau of Mines* T.342

Basic Pig Iron Prices at Valley Furnaces (F.O.B. Producing Point) In Dollars Per Short Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	71.99	71.99	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.24
1974	75.89	77.44	82.81	96.00	96.00	133.80	133.80	149.88	149.88	150.63	155.75	169.40	122.61
1975	179.88	179.88	179.88	182.38	182.38	182.38	182.38	182.38	182.38	182.38	182.38	182.38	181.76
1976	182.38	182.38	182.38	182.38	182.38	182.25	—	—	—	—	182.25	182.25	182.33
1977	182.25	—	178.00	178.00	178.00	178.00	178.00	178.00	191.00	191.00	191.00	191.00	183.11
1978	191.00	191.00	191.00	191.00	191.00	191.00	191.00	203.00	203.00	203.00	203.00	203.00	196.00
1979	203.00	203.00	203.00	203.00	203.00	203.00	203.00	202.50	202.50	202.50	202.50	202.50	203.00
1980	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00
1981	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	213.00	213.00	213.00	213.00	206.00
1982	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00
1983	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00	213.00
1984													

Sources: American Metal Market; Bureau of Labor Statistics T.343

IRON AND STEEL

World Production of Iron Ore[3], by Specified Countries (Gross Weight) In Millions of Long Tons

Year	Australia	South Africa	Brazil	Canada	Chile	China	France	W. Germany	India	Liberia	Spain	Sweden	United Kingdom	United States	USSR[1]	Venezuela	World Total[1]
1973	83.5		49.7	49.4	9.3	55.0	53.4	5.0	35.0	23.2	6.5	34.2	7.0	87.7	212.7	22.7	832.3
1974	95.4		74.3	49.2	10.1	60.0	53.4	4.4	34.9	23.4	8.1	35.6	3.5	84.4	221.3	26.0	883.8
1975	96.1		88.5	46.1	10.8	64.0	48.9	3.2	40.8	24.0	7.5	30.4	4.4	78.9	229.1	24.4	888.2
1976	91.8	15.4	92.6	54.7	9.9	59.1	44.5	2.2	43.2	20.2	8.1	29.4	4.5	80.0	237.3	18.4	885.1
1977	94.4	26.1	80.7	56.7	7.5	49.2	36.1	2.4	41.9	17.4	8.2	24.4	3.7	55.8	238.0	13.5	827.8
1978	81.8	23.1	83.6	41.1	6.7	68.9	32.9	1.6	38.2	17.7	8.4	21.1	4.2	81.6	242.5	13.3	833.3
1979	90.3	31.1	102.4	58.9	7.0	73.8	31.1	1.6	39.2	18.1	8.7	25.8	4.2	85.7	237.9	15.0	897.7
1980	94.0	25.9	112.9	48.0	8.1	73.8	28.5	1.9	41.3	17.9	9.1	26.8	.9	69.6	240.8	15.8	883.7
1981[2]	83.3	27.9	96.3	48.8	7.6	69.0	21.3	1.5	40.7	19.4	8.4	22.9	.7	73.2	238.6	15.3	843.2
1982[2]	86.4	24.2	108.3	41.2	5.7	68.9	19.1	1.4	40.3	17.9	8.4	15.9	.5	35.4	240.1	11.5	790.6
1983[1]	82.0	22.0	98.0	36.0		70.0			40.0	15.0		14.0		38.0	241.0	10.0	762.0

[1] Estimate. [2] Preliminary. [3] Iron ore, iron ore concentrates and iron ore agglomerates. *Source: Bureau of Mines* T.344

Salient Statistics of Iron Ore[2] in the U.S. In Millions of Long Tons

Year	Net Import Reliance % of Apparent Consumption	Production[3]					Shipments[4]	Value Mill. $ (at Mine)	Avg. Value $ at Mine Per Ton	Stocks—Dec. 31			Imports	Exports	Consumption	Manganiferous Shipments[5]
		Total[3]	Lake Superior	Northeast	Southeast	West				Mines	Consuming Plants	Lake Erie Docks				
1973		87.7	72.4	2.6	.3	12.0	90.7	1,163.7	12.84	10.9	46.0	3.1	43.3	2.7	146.9	.2
1974		84.4	70.7	2.4	.3	10.5	85.0	1,388.4	16.34	9.4	45.2	3.3	48.0	2.3	138.2	.2
1975	30	78.9	66.7	1.9	.1	9.6	75.7	1,620.6	21.41	12.3	52.2	4.6	46.7	2.5	114.1	.1
1976	31	80.0	67.4	2.0	.1	9.7	77.1	1,871.1	24.28	14.0	56.2	4.8	44.4	2.9	125.4	.2
1977	48	55.8	44.1	1.2	.1	9.3	54.1	1,422.7	26.32	14.8	42.3	3.0	37.9	2.1	116.0	.2
1978	29	81.6	72.7	8.9			83.2	2,401.4	28.86	12.4	39.3	3.6	33.6	4.2	124.8	.3
1979	25	85.7	77.2	8.6			86.2	2,814.4	32.64	11.3	39.0	5.4	33.8	5.1	125.4	.2
1980	25	69.6	62.3	7.3			69.6	2,544.1	36.56	11.7	35.7	6.1	25.1	5.7	98.9	.2
1981	22	73.2	67.5	5.7			72.2	2,915.2	40.39	12.7	36.2	6.6	28.3	5.5	104.4	.2
1982[1]	34	35.4	31.8	3.6			35.8	1,491.8	41.72	12.1	29.9	5.8	14.5	3.2	63.9	—
1983[6]	37	37.9	36.2	1.7			44.7			13.0	25.5	3.2	13.3	3.8	67.0	

[1] Preliminary. [2] Usable; less than 5% Mn. [3] Includes by-product ore. [4] Excludes by-product ore. [5] Iron ore; 5 to 35% Mn. [6] Estimate. *Source: Bureau of Mines* T.345

U.S. Imports (for Consumption) of Iron Ore from Principal Countries In Thous. of Long Tons

Year	India	Venezuela	Australia	Brazil	Canada	Chile	South Africa	USSR	Liberia	Sweden	Peru	Norway	Total
1974	—	15,378	638	6,572	19,702	296	1	126	2,730	335	1,810	—	48,029
1975	164	13,137	803	7,526	19,111	931	128	265	2,496	182	1,551	53	46,743
1976	130	9,001	617	5,388	24,962	608	162	44	2,153	441	716	151	44,390
1977	—	6,179	305	2,243	25,283	566	249	86	1,792	153	1,020	—	37,905
1978	—	6,083	264	3,979	19,236	390	94	—	2,170	256	818	302	33,616
1979	54	4,563	183	3,095	22,602	245	106	—	2,190	171	456	44	33,776
1980	—	3,602	—	1,995	17,311	322	6	—	1,590	33	193	—	25,058
1981	—	5,071	—	1,738	18,845	342	—	—	2,160	87	77	—	28,328
1982[1]	—	1,643	—	972	9,281	47	52	—	2,399	71	35	—	14,501
1983[2]		1,414		1,276	8,832				1,732	68			13,328

[1] Preliminary. [2] Estimate. *Source: Department of Commerce* T.346

Total[1] Iron Ore Stocks at End of Month in the U.S. In Millions of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1974	54.9	50.9	47.2	44.2	46.4	47.5	50.0	51.5	53.6	55.7	56.6	57.7
1975	56.6	54.9	52.9	52.3	56.7	57.6	61.2	63.9	66.1	66.6	67.3	68.1
1976	66.9	65.4	63.1	61.4	62.6	64.1	65.3	66.6	69.3	71.4	73.2	75.0
1977	73.5	72.2	70.1	68.5	67.7	68.5	69.7	67.2	65.9	63.5	60.7	59.4
1978	56.3	54.1	53.1	50.4	49.9	51.9	51.6	53.8	54.7	55.5	56.4	55.3
1979	53.0	50.7	47.8	46.7	46.6	48.0	51.0	51.5	52.0	54.2	55.2	55.8
1980	53.7	51.8	49.0	49.6	50.7	53.5	56.8	57.5	58.0	57.7	56.6	56.1
1981	54.5	53.2	50.8	49.8	51.4	53.7	56.4	58.8	59.6	60.4	60.1	60.2
1982	60.4	60.9	57.3	57.7	57.6	58.5	59.1	57.8	55.8	54.5	52.6	52.6
1983[2]	45.5	42.6	39.6	37.5	37.2	37.4	37.0	35.3	35.7	34.7	33.8	

[1] All stocks at mines, furnace yards and at U.S. docks. [2] Preliminary. *Source: American Iron Ore Association* T.347

Lard

The world's largest producers of lard are China and the Soviet Union, but the bulk of their output is consumed domestically. U.S. lard production in the 1983/84 season which ends September 30, 1984 was estimated by the USDA early in 1984 at 950 million pounds, compared with 970 million in the 1982/83 season. Most of the anticipated reduction in U.S. lard production was expected to take place in the latter portion of the 1983/84 season, based on a projected significant decline in hog slaughter as 1984 progressed.

Domestic consumption of lard was projected at 860 million pounds, about the same as in 1982/83. However, consumption in the first half of the 1983/84 season amounted to 203 million pounds versus 153 million pounds during the corresponding period of the 1982/83 season, according to Census Bureau data released in early May 1984. Thus, it would appear that domestic use for the entire season could exceed earlier projections.

Lard exports by the U.S. were expected to total 100 million pounds in the 1983/84 season, slightly above the 95 million pounds exported in 1982/83. Short supplies of vegetable oils in the U.S. market were expected to result in less lard available for export, and the strong U.S. dollar also was a limiting factor for lard exports. U.S. lard exports in calendar year 1983 dropped to 40.2 thousand metric tons from 46.7 thousand tonnes in 1982. Mexico was the most important U.S. export market again in 1983, although its purchases of U.S. lard declined to 19.7 thousand tonnes from 24.6 thousand tonnes in 1982.

U.S. lard prices (loose, tanks, Chicago) were as low as 15 cents per pound in early July 1983, but soared to a calendar year high of 28 cents per pound in late August in response to sharply reduced soybean crop prospects and a dramatic rise in the price of soybean oil. Prices subsequently sagged to around 17½ cents, reflecting heavy slaughter of hogs in the fourth quarter of 1983, but later advanced to around 30 cents per pound in the first quarter of 1984. Lard prices for the remainder of the 1983/84 season were expected to follow the lead of soybean oil prices.

Supply and Distribution of Lard in the United States In Millions of Pounds

	Supply							Distribution							
	Production									Domestic Disappearance					
	Commercial												Direct Use as Lard		
Year	Federally Inspected	Other	Total	Farm	Total Production	Stocks Jan. 1[2]	Total Supply	Exports[3]	Shipments to U.S. Territories	Total	Shortening	Margarine	Civilian	Military	Civilian Per Capita Lbs.
1972	1,464	76	1,540	18	1,550	100	1,658	164	25	1,418	432	128	787	1	3.7
1973	1,181	55	1,236	18	1,254	51	1,305	113	8	1,140	341	72	705	1	3.3
1974	1,286	58	1,347	22	1,366	44	1,410	161	21	1,192	317	160	681	1	3.2
1975	956	39	995	17	1,012	36	1,048	88	56	876	165	45	615	1	2.8
1976	1,010	33	1,043	17	1,060	28	1,088	181	54	819	156	37	568	1	2.6
1977	1,022		1,022	16	1,038	34	1,072	182	47	814	185	73	495	1	2.2
1978	991		991	15	1,006	29	1,035	120	42	835	220	68	478	1	2.2
1979	1,141		1,141	15	1,156	38	1,200	96	42	997	316	76	548	1	2.5
1980	1,207		1,207		1,207	50	1,257	92	38	1,078	382	92	540	1	2.5
1981	1,159		1,159		1,159	49	1,208	150	—	1,022	328	85	573	1	2.5
1982[1]	1,011	—	1,011	—	1,011	37	1,048	103	—	908	283	28	585	1	2.4
1983[4]					900	38	938				277				
1984[4]						34									

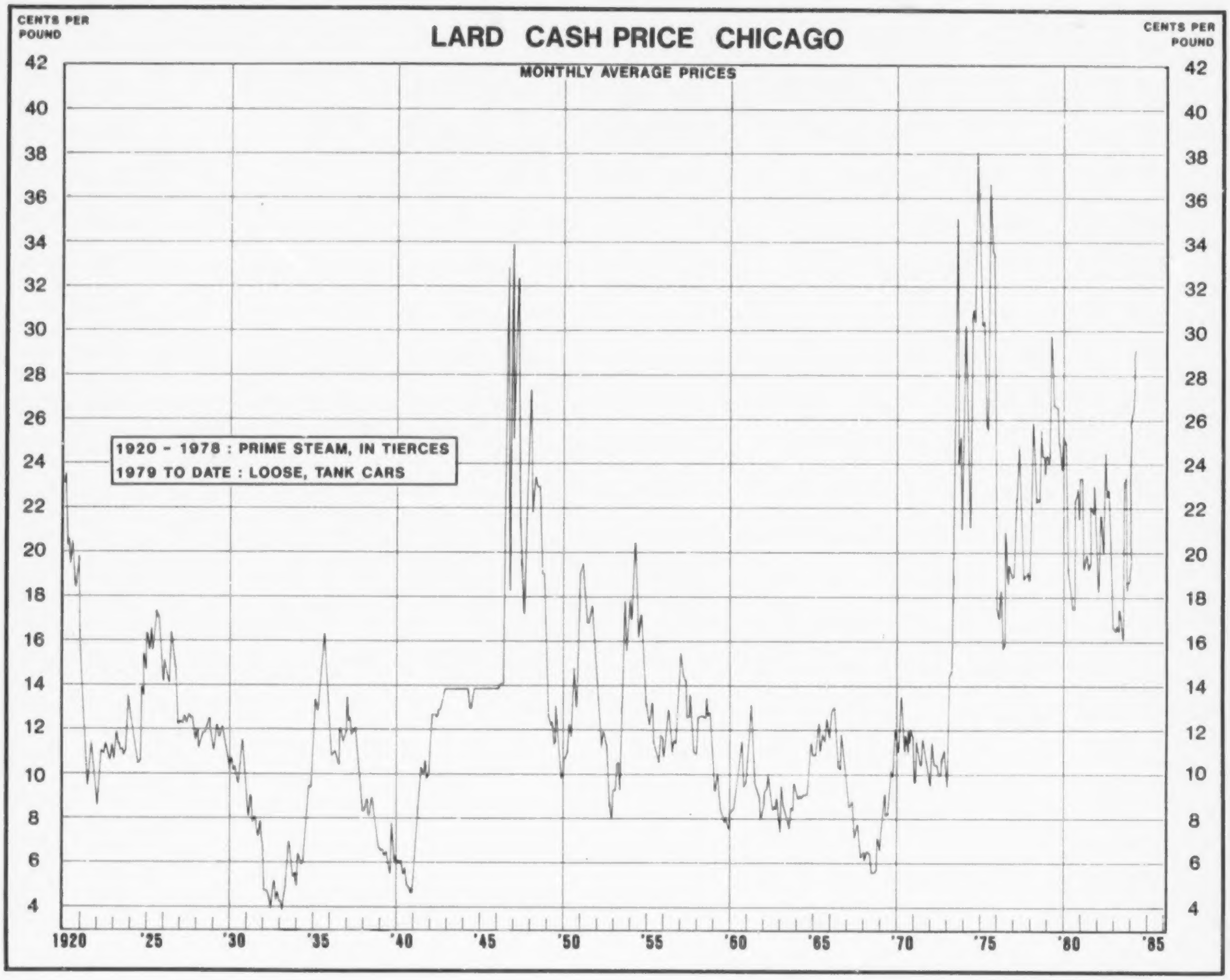
[1] Preliminary. [2] Factory & warehouse. [3] Includes military shipments for civilian relief abroad. Also non-food products; the bulk goes into shortening. [4] Estimate. *Source: Economic Research Service, U.S.D.A.* T.348

Lard Exports[2] of the United States by Selected Country of Destination In Thousands of Metric Tons[3]

Year	Asia	Belgium & Lux.	Canada	Belize	Bolivia	Neth. Antilles	Colombia	W. Germany	Haiti	Mexico	Ecuador	Netherlands	Poland	United Kingdom	Yugoslavia	Grand Total
1971	—	—	9.2	—		—	—	1.0	1.4	26.0	—	—	—	229.7	5.3	282.3
1972	—	—	11.8	—		—	—	1.2	3.2	26.3	—	—	—	116.1	—	164.4
1973	—	—	6.5	2.9		.5	.1	1.1	2.4	41.5	—	—	—	58.0	—	113.3
1974	—	2.0	20.1	1.9		.3	4.8	—	2.4	51.4	—	—	—	75.6	—	161.4
1975[3]	—	—	9.3	.9		.1	.1	—	.3	24.4	—	—	—	4.6	—	39.8
1976	4.3	4.1	17.0	1.4		.1	16.0	—	1.3	29.1	4.3	8.4	—	29.7	—	117.3
1977	.3	1.7	20.1	1.3	.3	.2	.1	—	1.2	31.1	25.4	12.2	3.4	19.3	—	82.6
1978	.4	—	19.4	1.4	—	.3	.2	—	.9	26.7	15.5	4.9	—	3.8	—	54.2
1979	.3	—	9.3	1.7	1.1	.4	.1	—	1.1	26.7	—	—	—	1.7	—	43.5
1980	.2	—	7.9	1.5	.3	.3	1.1	—	1.0	24.0	—	—	2.5	1.7	—	41.9
1981	.1	—	9.0	1.8	2.1	.4	1.0	—	1.1	32.6	—	—	17.0	.6	—	67.9
1982[1]	1.1	1.0	11.4	1.4	0	.6	.1	—	2.1	24.6	—	—	0	.6	—	46.7
1983																

[1] Preliminary. [2] Excludes exports for civilian relief & shipments by CARE. [3] Data prior to 1975 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.* T.352

LARD



Average Wholesale Price of Lard—Loose, Tank Cars, Chicago In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	37.0	30.0	28.0	28.5	28.5	24.0	38.0	36.0	37.5	35.0	30.0	18.5	30.9
1976	17.0	17.4	17.0	15.8	15.6	16.0	19.0	19.3	21.0	17.8	19.0	19.1	17.8
1977	20.5	22.4	21.5	25.0	26.0	23.1	20.5	19.0	17.9	21.5	19.0	19.3	21.3
1978	19.4	20.8	23.8	25.6	22.0	22.5	23.3	22.3	26.0	24.5	24.5	23.3	23.2
1979	24.5	24.0	25.1	29.8	26.8	—	—	—	26.6	25.1	23.8	25.1	25.6
1980	22.0	21.6	19.3	19.0	18.0	17.5	17.5	22.5	23.0	21.6	23.3	23.3	20.7
1981	20.0	19.0	19.6	19.9	19.4	19.6	22.0	21.8	22.8	21.5	21.0	18.4	20.3
1982	20.0	21.5	20.0	22.0	23.0	24.6	22.6	22.8	21.3	21.0	17.3	16.5	21.1
1983	16.4	16.7	16.4	17.4	17.1	16.4	16.1	23.2	23.4	18.3	18.7	18.8	18.2
1984	25.9	26.3	28.9	29.1									
1985													

Source: Economic Research Service, U.S.D.A. T.350

United States Commercial[1] Production of Lard In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	144.1	120.7	139.4	153.0	130.0	136.5	131.5	135.4	157.6	175.5	174.2	178.1	1,776
1971	166.1	129.2	193.4	162.4	146.0	157.8	133.7	141.9	148.1	139.6	158.9	152.7	1,830
1972	123.2	105.0	148.9	131.5	138.7	130.8	101.6	120.8	108.0	122.7	130.3	103.1	1,464
1973	110.6	91.8	108.7	95.4	122.5	105.3	82.8	81.9	80.1	106.1	108.1	94.9	1,181
1974[2]	89.9	84.5	87.4	100.7	107.6	89.4	81.8	115.0	97.8	124.1	102.9	89.2	1,170
1975	103.0	87.0	94.0	96.0	86.0	74.0	68.0	67.0	75.0	78.0	83.0	84.0	995
1976	87.0	67.0	90.0	85.0	80.0	76.0	74.0	87.0	91.0	103.0	108.0	95.0	1,043
1977	73.0	65.0	100.0	85.0	85.0	85.0	73.0	86.0	89.0	93.0	102.0	85.0	1,021
1978	82.0	73.0	83.0	82.0	87.0	78.0	74.0	82.0	83.0	88.0	94.0	85.0	991
1979	83.0	69.0	86.0	91.0	102.0	95.0	95.0	104.0	92.0	117.0	112.0	95.0	1,141
1980	105.0	94.0	98.0	111.0	107.0	98.0	95.0	87.0	98.0	111.0	96.0	102.0	1,203
1981	100.0	87.0	99.0	104.0	95.0	91.0	89.0	86.0	96.0	104.0	99.0	104.0	1,155
1982	88.0	77.0	94.0	—	—	257.0	—	—	234.0	—	—	261.0	1,011
1983[3]	N.A.	66.0	84.0	81.0	79.0	79.0	73.0	81.0	84.0	90.0	94.0	88.0	900
1984[3]	79.0	74.0											

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[1] Includes "Rendered Pork Fat." [2] Data prior to 1974 are for FEDERALLY INSPECTED ONLY. [3] Preliminary. *Source: Department of Agriculture* T.354

Domestic Disappearance of Lard in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	96.4	98.3	100.9	89.4	111.7	101.8	88.5	80.4	83.7	90.3	94.3	86.2	1,122
1974	89.9	84.5	87.4	100.7	107.6	89.4	81.8	115.0	97.8	124.1	102.9	89.2	1,170
1975	98.9	61.3	90.4	81.0	78.6	59.1	65.5	65.7	55.3	68.5	69.1	65.5	859
1976	67.6	47.4	86.2	53.0	67.7	53.6	67.8	74.6	65.0	79.3	76.1	64.8	803
1977	50.5	55.0	73.3	48.3	77.0	66.9	64.3	80.8	73.0	60.1	82.7	66.4	798
1978	68.3	62.3	65.6	71.9	74.8	60.3	67.7	72.2	68.3	77.5	75.2	64.4	825
1979	70.1	62.1	76.0	78.8	84.3	88.3	78.9	97.6	88.6	103.2	94.7	86.0	1,009
1980	48.2	36.8	39.1	43.0	48.2	42.9	41.8	42.0	42.7	48.4	47.0	46.9	527
1981	45.5	39.1	36.8	38.4	34.2	36.6	33.2	35.3	38.8	31.1	37.8	41.5	448
1982	35.3	25.4	28.6	33.4	31.2	28.1	24.2	22.2	22.4	21.6	23.3	26.3	322
1983[1]	25.4	27.2	29.3	32.2	41.9	37.1	30.1	34.4	31.7	33.8	38.9	38.3	400
1984[1]	33.9	27.3											

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[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.349

United States Cold Storage Holdings of all Lard[1], on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	70.1	64.8	61.6	67.1	75.2	65.3	64.9	66.5	54.2	59.8	59.0	74.0
1971	82.5	90.7	85.8	80.9	79.8	90.9	101.1	89.1	81.6	76.9	82.7	82.4
1972	99.9	78.1	66.1	64.3	80.7	89.6	83.2	64.1	52.3	44.0	44.0	57.5
1973	51.2	52.1	44.5	49.3	49.1	49.9	39.9	33.8	32.2	28.4	35.1	37.3
1974	43.7	56.3	45.4	53.3	55.7	55.2	50.0	54.5	50.7	47.7	37.7	33.2
1975	35.7	34.0	34.4	26.4	31.3	31.9	23.6	21.6	19.2	22.6	18.7	25.0
1976	28.3	33.5	36.1	29.3	31.9	32.0	32.2	26.9	28.4	33.6	37.5	37.4
1977	33.9	31.5	37.6	38.4	50.2	50.1	47.2	47.4	38.2	31.7	32.1	32.1
1978	28.5	30.0	29.7	33.9	35.7	35.4	36.8	32.4	29.7	35.1	29.5	32.0
1979	38.1	40.5	39.6	35.8	42.8	47.9	46.0	51.4	46.4	43.9	44.7	52.0
1980	49.9	54.4	61.3	62.5	57.9	51.7	59.1	57.1	55.0	43.5	44.6	48.7
1981	49.4	50.4	46.9	42.2	40.5	40.1	40.7	42.6	39.5	35.6	36.7	39.1
1982	37.0	35.3	32.5	34.0	32.7	31.8	31.4	25.5	32.2	24.2	29.5	39.0
1983[2]	37.5	38.3	31.5	36.1	39.1	43.0	41.8	41.0	35.6	40.4	41.4	45.8
1984[2]	34.2	34.1	28.3									

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[1] Stocks in factories & warehouses (except that in hands of retailers). [2] Preliminary. *Source: Bureau of the Census* T.351

Lead

World mine production of lead in 1983 was about 3 percent below 1982 output, according to preliminary U.S. Bureau of Mines data. U.S. mine production of lead was 13 percent lower than in 1982, influenced in part by the shutdown in March of the nation's second largest lead mine for economic reasons. Primary refined metal production in 1983 was about the same as in 1982, but secondary production (reported plus estimated production) was about 8 percent below that of 1982 due to a continuing shortage of scrap.

U.S. imports of lead, nearly three-quarters of which consisted of refined metal, increased 40 percent in 1983. Increased imports were encouraged as the premium for the U.S. producers' price over the London Metal Exchange (LME) price widened beyond the cost of freight plus duty. Canada continued as the major supplier of lead to the U.S. market in 1983, followed by Mexico, Peru, and Australia.

Domestic consumption of lead in 1983 was estimated by the U.S. Bureau of Mines to be about unchanged from a year earlier, helped by strong demand by battery manufacturers in the latter part of the year. Lead's major uses are in storage batteries, as an antiknock additive in gasoline, and in materials for the construction and metalworking industries. Other uses include ammunition, protective coatings and paints, radiation shielding, and electrical cable sheathing. The U.S. currently consumes about 20 percent of the world's supply, with secondary lead supplying a little over 50 percent of U.S. demand. Transportation accounted for the major end use in the U.S., with batteries, gasoline additives and other applications accounting for 75 percent; construction, paint, ammunition, and electrical consumption—about 20 percent; and ceramics, glass, type metal and other small uses—about 5 percent.

The growth in lead use is dependent upon the development of cost-competitive and reliable electric vehicles for general and new industrial uses, major power supply load-leveling applications, and continuing high growth for uninterrupted power supply systems, according to the Bureau of Mines. This agency expects U.S. apparent consumption of lead in 1984 of 1.08 million metric tons.

U.S. exports (lead content) of ore and concentrates were 31 percent below 1982, and exports of lead materials except for scrap were off 63 percent. Scrap exports declined only 2 percent in 1983.

December 31, 1983 U.S. stocks of lead at primary refineries were 21 percent below the year-earlier level, and stocks at secondary smelters and consumers declined 26 percent.

Lead is an important strategic and critical metal because of the dependency of both military and civilian activities on the stored energy provided by lead-acid batteries. As of November 30, 1983, The National Defense Stockpile held an inventory of 545,000 metric tons of lead vs. a goal of 998,000 tonnes.

U.S. producer prices for lead started 1983 in a range of 20.5 to 23 cents, influenced by poor demand for battery lead and oxides, and declined to a year's low of 19 to 20 cents per pound in early June—the weighted average transactions price of 19.4 cents for the month of June was the lowest since February 1976. U.S. producer prices later rose to the 25 to 27 cents per pound range, helped by increased U.S. auto production and the approaching pickup in seasonal demand for batteries. In November the premium for U.S. prices over LME widened to around 6.8 cents vs. a more usual 2.5 to 3.0 cents per pound.

Futures Market

Lead futures are traded on the London Metal Exchange (LME).

World Smelter (Primary & Secondary) Production of Lead In Thousands of Metric Tons

Year	Australia[3]	Belgium[4]	Bulgaria	Canada[3]	China[2]	France	W. Germany	Japan	Mexico[3]	Peru[3]	Spain	United States	USSR	Yugoslavia[3]	World Total[5]
1976	342.6	91.7	112.0	231.0	140.0	191.5	278.3	305.7	234.7	74.1	101.7	1,251	600.0	140.3	4,990
1977	337.9	73.6	120.0	240.6	150.0	144.4	373.5	305.2	216.2	79.2	118.6	1,306	610.0	145.0	5,140
1978	356.0	76.5	120.0	245.9	160.0	151.4	305.0	293.9	215.4	74.3	122.2	1,337	620.0	140.4	5,133
1979	385.1	60.7	119.0	252.4	170.0	159.9	316.6	294.2	223.0	85.1	127.0	1,380	625.0	133.6	5,316
1980	360.7	83.9	119.0	234.6	170.0	161.7	301.4	315.6	195.0	82.0	124.0	1,224	625.0	124.6	5,088
1981[1]	369.3	88.2	119.0	238.1	170.0	160.0	362.3	332.3	206.7	79.2	118.0	1,139	645.0	120.4	5,029
1982[1]	388.8	80.8	119.0	241.9	170.0	150.0	367.0	311.4	195.3	77.0	117.0	1,088	650.0	120.0	5,075
1983[2]	400			230					200	81		1,000		119	5,200

[1] Preliminary. [2] Estimated. [3] Refined & bullion. [4] Includes scrap. *Source: Bureau of Mines* T.355

Consumption of Lead in the United States by Products In Thousands of Metric Tons

Year	Ammunition	Bearing Metal	Building[2]	Cable Covering	Calking Lead	Casting Metals	Glass & Ceramic Products	Paints	Solder	Storage Battery Grids, Post, etc.	Storage Battery Oxides	Chemicals Petrol. Refin.	Type-Metal	Brass and Bronze	Total Consumption
1978[5]	55.8	9.5	23.1	13.9	9.9	3.6	91.6		68.4	412.6	466.7	178.3	10.8	16.5	1,432.7
1979	53.2	9.6	27.6	16.4	8.0	22.7	48.8	26.7	54.3	375.6	438.8	186.9	10.0	18.7	1,358.3
1980	48.7	7.8	28.4	13.4	5.7	19.0	45.4	20.7	41.4	302.2	343.1	127.9	9.0	14.0	1,070.3
1981	49.5	6.9	28.2	12.1	5.5	18.6	44.3	16.3	29.7	342.2	428.0	111.4	7.8	13.3	1,167.1
1982[1]	44.2	6.1	23.8	15.2	4.1	25.1	34.5	13.4	28.5	312.6	391.7	119.2	2.8	11.4	1,075.4
1983[3]	40.2	3.4	12.6	10.2	1.4	1.9	30.2	15.4	18.4	257.0	279.8	89.1	.2	8.8	1,080.7

[1] Preliminary. [2] Chiefly pipes, traps & bends & sheet lead. [3] Estimate. *Source: Bureau of Mines* T.358

Salient Statistics of Lead in the United States   In Thousands of Metric Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production of Refined Lead From					Total Value of Refined Mil. $	Secondary Lead Recovered				Total Value of Secondary Mil. $	Dec. 31 Stocks		Avg. Price (¢ per Lb.)	
		Domestic Ores[2]	Foreign Ores[2]	Total Primary	Secondary Sources	Total		As Refined Metal	In Antimonial Lead	In Other Alloys	Total		Producers' Stocks[3]	Consumers' Stocks	New York	London
1975	11	481.0	96.1	577.1	—	577.1	273.9	246.1	285.9	65.4	597.3	283.5	142.0	120.9	21.53	18.73
1976	15	515.8	76.5	592.3	—	592.3	301.6	282.1	310.2	66.8	659.1	335.7	110.4	117.6	23.10	20.46
1977	13	486.7	62.0	548.7	.1	548.8	371.4	303.1	383.4	71.1	757.6	512.8	91.1	121.4	30.70	28.00
1978	12	501.6	63.5	565.2	1.2	566.4	419.3	282.6	409.9	76.5	769.2	570.7	98.7	125.2	33.65	29.86
1979	5	530.0	45.6	575.6	2.9	578.5	668.0	352.2	378.8	70.3	801.4	930.0	89.3	153.2	52.64	54.52
1980	[5]	508.2	39.4	547.6	2.1	549.7	512.6	315.2	306.7	53.7	675.6	632.4	126.0	126.2	42.46	41.21
1981	1	440.2	55.1	495.3	1.7	497.1	398.9	282.2	304.4	54.6	641.1	516.3	140.2	123.2	36.53	33.30
1982[1]	3	459.9	52.3	512.2	.7	512.8	288.4	240.5	284.4	46.4	571.3	321.7	125.5	97.2	25.54	24.66
1983[4]	11					515.0					530.0			71.7	21.68	19.27

[1] Preliminary. [2] And base bullion. [3] At primary smelters & refineries. [4] Estimates. [5] Net exporter. *Source: Bureau of Mines* T.357

U.S. Mine Production of Recoverable Lead   In Thousands of Metric Tons

Year	Arizona	California	Colorado	Idaho	Illinois	New York	Missouri	Montana	Nevada	New Mexico	Oklahoma	Utah	Virginia	Washington	Wisconsin	Total U.S.[2]
1975	.4	.1	24.6	45.7	N.A.	2.7	468.1	.2	2.7	1.8	—	11.5	2.3	N.A.	N.A.	563.8
1976	.3	.1	24.3	48.7	N.A.	2.9	454.5	.1	.5	N.A.	N.A.	14.8	1.8	N.A.	N.A.	553.0
1977	.3	—	20.9	42.9	N.A.	2.5	453.8	.1	.7	N.A.	N.A.	9.7	2.0	1.1	N.A.	537.5
1978	.4	N.A.	15.2	44.8	N.A.	1.0	461.8	.1	.7	N.A.	—	2.5	1.8	N.A.	N.A.	529.7
1979	.4	N.A.	7.6	42.6	N.A.	.5	472.1	.3	—	N.A.	—	N.A.	1.6	—	N.A.	525.6
1980	.2	N.A.	10.3	38.6	N.A.	.9	497.2	.3	—	—	—	—	1.6	N.A.	—	550.4
1981	1.0	N.A.	11.4	38.4	N.A.	1.0	389.7	.2	—	—	—	1.7	1.6	—	—	445.5
1982	.4	N.A.	N.A.	N.A.	N.A.	1.0	474.5	.7	—	—	—	N.A.	N.A.	—	—	512.4
1983[1]	.1						407.8	1.2								447.7

[1] Preliminary. [2] Includes Alaska. *Source: Bureau of Mines* T.356

U.S. Foreign Trade of Lead   In Thousands of Metric Tons

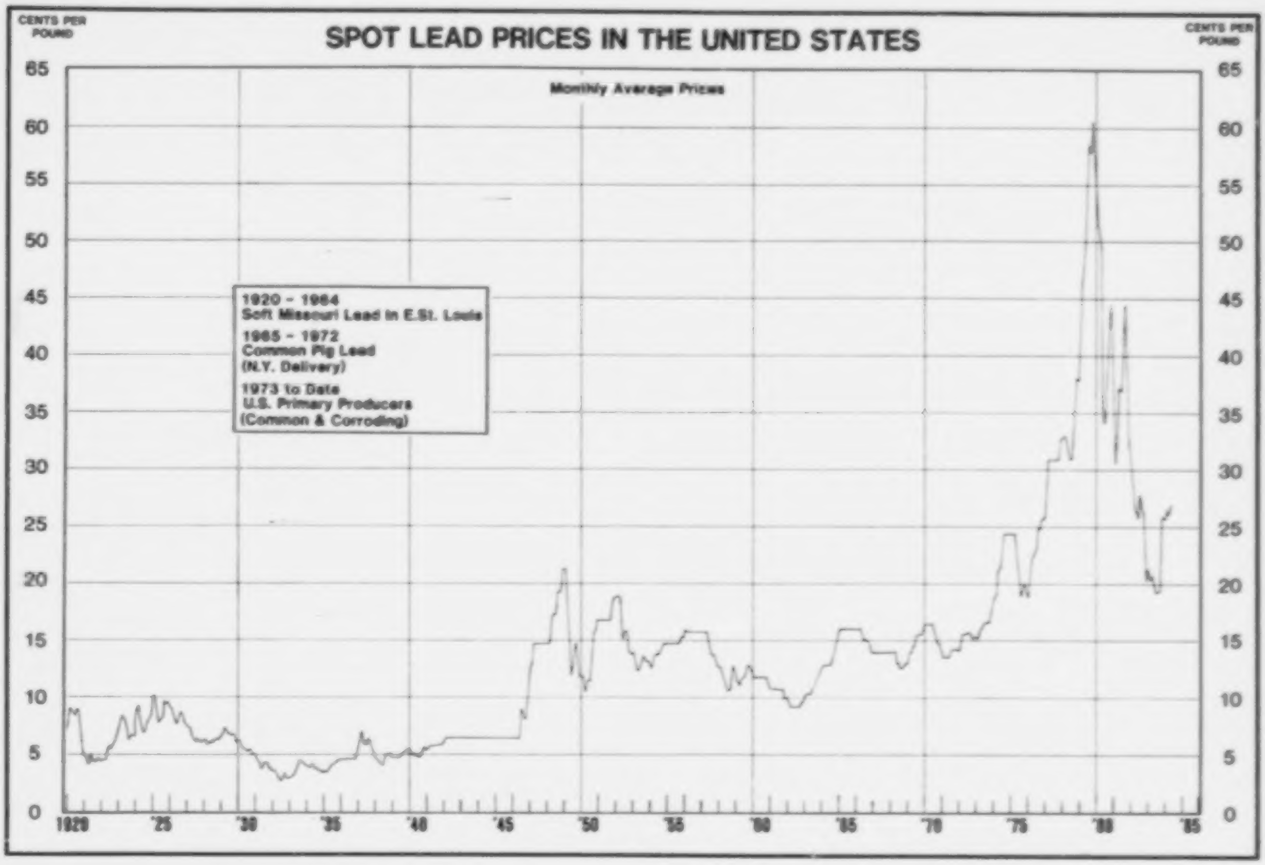
Year	Exports				Imports for Consumption					General Imports From: Ore, Flue Dust & Matte			General Imports From: Pigs & Bars			
	Unwrought Lead[3]	Wrought Lead[4]	Scrap	Total	Ores, Flue Dust or Fume & Mattes	Base Bullion	Pigs & Bars	Reclaimed Scrap, Etc.	Value Million $	Australia	Peru	Canada	Australia	Mexico	Peru	Canada
1977	4.3	4.7	77.5	86.5	88.8	7.3	230.1	3.5	196.9	16.6	6.6	16.0	19.9	71.8	30.4	75.4
1978	3.2	5.1	98.6	106.9	61.9	4.3	225.4	3.3	203.0	6.5	6.3	19.6	16.3	80.2	25.7	70.4
1979	7.4	3.3	119.7	130.4	44.4	1.7	182.6	4.0	248.3	1.9	12.4	12.8	17.3	73.6	17.9	
1980	156.5	8.0	119.7	284.2	29.6	.3	81.3	2.9	116.5	3.0	18.0	8.5	11.3	28.6	3.3	34.9
1981	16.8	6.5	59.4	82.7	27.2	.4	100.1	2.7	110.5	2.2	14.1	23.5	10.9	33.7	2.9	50.8
1982[1]	51.0	4.6	51.8	107.4	18.9	—	94.9	4.8	69.9	7.7	14.5	4.8	7.3	23.5	8.3	49.8
1983[2]			50.9		19.8	.1	134.4	4.2		10.0	22.7	6.1	10.9	34.9	10.1	72.7

[1] Preliminary. [2] Estimates. [3] And lead alloys. [4] Blocks, Pigs, etc. *Source: Bureau of Mines* T.359

U.S. Mine Production of Recoverable Lead   In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	53.5	50.0	45.3	40.1	55.9	43.9	51.4	55.7	51.4	53.7	49.0	53.2	603.0
1974	57.1	52.8	58.0	52.3	53.3	54.9	54.8	58.7	50.0	64.9	53.2	53.9	663.9
1975	55.6	52.6	58.5	56.0	53.3	50.8	37.8	40.1	50.6	56.3	49.0	52.9	621.5
1976	50.4	52.0	57.8	50.6	51.0	50.6	48.1	51.0	49.2	49.6	49.0	50.4	609.5
1977	45.0	49.2	56.9	53.2	48.3	50.9	41.9	52.6	46.4	49.2	48.6	50.3	592.5
1978	49.8	45.0	57.1	49.4	54.3	40.1	35.5	47.6	49.5	55.5	50.0	49.1	528.8
1979	48.4	44.7	43.1	37.3	42.0	42.6	41.5	49.5	35.2	50.5	46.8	44.1	525.6
1980	51.4	50.3	49.8	48.9	49.9	46.1	43.4	41.5	39.4	48.6	39.7	41.3	550.4
1981	42.6	40.9	43.4	26.7	27.8	17.4	31.8	38.2	48.0	47.5	39.8	41.3	445.5
1982	40.5	43.5	48.7	44.3	42.1	42.6	37.0	42.9	41.7	45.0	42.1	45.1	512.4
1983[1]	44.7	39.4	37.2	36.6	35.7	28.3	35.1	43.1	37.2	37.0	38.2	34.8	447.6
1984[1]	41.6												

[1] Preliminary. *Source: Bureau of Mines* T.359A



SPOT LEAD PRICES IN THE UNITED STATES

Average Price of Pig Lead, U.S. Primary Producers[1] (Common Corroding) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	13.50	13.50	13.50	13.50	13.50	13.70	14.25	14.25	14.25	14.25	14.25	14.19	13.89
1972	14.15	14.63	15.50	15.63	15.75	15.75	15.75	15.71	15.50	15.21	15.25	15.25	15.34
1973	15.09	15.42	15.97	16.00	16.25	16.50	16.50	16.50	16.50	16.50	16.50	17.96	16.31
1974	18.95	19.00	19.30	21.16	21.50	23.00	24.50	24.50	24.50	24.50	24.50	24.50	23.19
1975	24.50	24.50	24.50	24.50	23.21	19.00	19.00	19.52	20.00	20.00	20.00	19.48	21.52
1976	19.00	19.00	20.30	22.00	22.90	23.00	24.26	24.75	24.75	24.77	25.71	25.75	23.02
1977	26.99	28.95	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.02	32.00	32.86	30.74
1978	33.00	33.00	33.00	33.00	31.23	31.00	31.00	32.50	34.19	36.05	38.18	38.00	33.68
1979	40.64	43.74	46.09	48.00	49.44	57.14	58.68	57.96	58.47	60.74	58.30	57.11	53.03
1980	51.06	50.00	49.52	45.34	36.00	34.19	35.95	40.95	42.43	45.00	44.06	40.43	42.91
1981	34.13	30.63	35.32	37.68	37.10	38.23	41.25	44.64	42.52	37.59	34.34	31.75	37.10
1982	29.90	28.87	27.98	26.57	26.50	25.89	27.88	27.00	26.64	23.00	21.48	20.12	26.03
1983	21.60	20.87	20.43	21.00	20.10	19.34	19.30	19.38	22.24	25.61	26.00	25.69	21.80
1984	26.50	26.00	26.45	27.00									

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[1] Prior to Nov. 1973 prices are for Common Pig (N.Y. Delivery—Carload Lots). *Source: American Metal Market*

T.360

Refiners Production[1] of Lead in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	62.7	59.1	63.4	42.8	66.4	58.6	60.1	62.7	56.2	61.7	62.3	58.5	714.5
1973	63.9	65.5	65.9	56.8	65.3	67.9	52.4	70.8	64.9	65.5	64.3	59.2	762.3
1974	62.5	60.3	60.2	52.8	60.2	51.8	59.6	60.6	59.7	58.2	60.7	62.6	709.2
1975	65.0	55.0	60.4	49.5	51.5	45.0	46.4	52.3	52.5	57.9	53.2	52.6	641.4
1976	57.7	56.3	56.2	58.5	61.5	54.1	52.9	57.1	50.2	53.5	49.1	51.3	658.4
1977	51.2	46.6	57.7	50.2	51.2	46.9	41.5	46.9	50.2	56.5	58.0	55.2	612.0
1978	60.0	50.1	55.3	55.5	49.1	44.8	42.5	50.4	51.5	60.9	55.1	54.2	629.2
1979	53.0	52.2	60.6	52.5	58.1	55.0	52.6	49.9	45.4	52.9	54.6	54.3	641.1
1980	56.9	49.3	54.1	47.5	47.0	47.1	52.0	48.2	50.2	52.2	48.4	53.5	606.4
1981	58.0	53.6	58.2	52.7	35.0	24.4	33.0	45.1	43.7	46.1	39.4	44.0	533.2
1982	50.3	45.2	44.0	36.1	54.3	53.0	44.2	46.4	49.2	50.6	50.8	48.6	572.6
1983	57.0	50.9	52.8	48.9	47.2	42.0	39.5	45.3	41.2	50.0	50.9	46.4	572.3
1984	51.5	51.4	43.0	40.0									
1985													

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[1] Represents refined lead produced from domestic ores by primary smelters plus small amount of secondary material passing through these smelters. Includes GSA metal purchased for remelt. Source: *American Bureau of Metal Statistics, Inc.* T.362

Domestic Shipments[1] of Lead in the United States by Refiners In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	56.4	66.3	73.2	50.4	59.9	54.7	46.5	51.5	55.6	69.2	62.6	58.0	704.2
1973	70.0	69.4	68.1	64.4	67.8	70.4	62.3	69.4	69.2	75.4	72.6	54.5	823.4
1974	72.6	64.6	63.9	57.2	60.8	56.9	65.8	60.9	61.4	63.5	58.9	49.7	736.2
1975	47.2	36.7	37.3	44.2	49.7	38.2	45.4	62.5	64.9	67.6	47.0	54.1	594.9
1976	49.2	54.2	58.8	63.6	62.0	54.8	59.3	66.1	55.8	62.7	57.2	51.2	694.9
1977	57.2	56.0	62.9	53.6	50.7	51.3	42.2	47.4	51.6	54.7	55.0	55.7	638.3
1978	59.9	49.7	51.3	43.5	49.0	44.1	44.3	56.3	56.1	62.8	54.5	53.1	624.5
1979	56.7	54.7	58.9	52.2	58.5	55.2	56.1	47.0	45.9	52.9	39.7	30.8	608.6
1980	40.5	37.6	38.9	28.8	30.1	35.3	36.6	48.0	60.1	55.6	31.0	38.6	481.0
1981	31.9	42.5	51.7	48.8	41.9	33.4	34.2	51.7	55.1	35.5	28.2	24.2	479.0
1982	39.3	35.8	37.0	30.7	40.9	37.8	41.9	48.1	42.6	46.7	39.8	39.7	480.4
1983	43.5	33.8	44.3	40.3	32.1	39.3	41.8	57.8	62.0	54.5	55.6	39.0	544.1
1984	46.6	43.8	36.6	34.6									
1985													

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[1] Includes GSA metal. Source: *American Bureau of Metal Statistics, Inc.* T.363

Total Stocks of Lead[1] in the United States at Refiners, at End of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	58.3	50.4	38.0	29.1	36.3	40.6	55.6	67.7	69.3	64.0	64.4	67.3
1973	59.4	54.7	39.9	33.2	35.3	32.3	20.5	24.4	26.8	22.8	20.7	27.6
1974	40.8	35.5	35.2	28.1	21.3	19.2	18.9	21.2	21.7	20.8	25.2	38.1
1975	55.5	73.8	96.7	101.6	104.5	111.8	110.7	100.7	87.7	77.7	83.7	82.1
1976	91.5	92.8	90.6	87.8	85.3	84.6	76.7	67.7	61.7	54.3	45.6	46.0
1977	37.9	28.2	23.5	20.9	20.1	15.1	13.7	13.3	12.4	14.8	16.5	16.0
1978	16.3	16.6	20.8	32.6	32.3	33.0	31.0	24.9	20.1	18.1	18.7	19.8
1979	15.8	13.4	15.2	15.0	14.6	14.3	10.8	13.7	13.0	13.9	27.8	51.3
1980	67.8	75.0	71.6	83.8	90.8	82.7	66.3	53.8	35.2	29.2	46.5	60.9
1981	86.6	92.3	88.9	87.8	71.2	61.6	59.9	52.6	38.5	49.1	57.5	62.8
1982	65.4	67.2	65.9	60.1	65.1	73.2	70.8	64.9	71.4	72.9	78.0	79.0
1983	83.3	91.2	84.9	89.0	100.6	98.6	95.3	82.1	61.3	56.6	51.6	58.9
1984	63.3	70.3	76.1	81.5								
1985												

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[1] Stocks at own plant & elsewhere. Source: *American Bureau of Metal Statistics, Inc.* T.364

LEAD

Total[1] Lead Consumption in the United States In Thousands of Short Tons

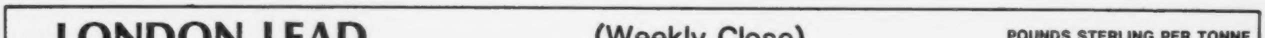
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	122.3	123.7	132.3	122.4	129.0	126.7	91.4	127.4	126.0	132.2	131.4	120.5	1,485
1973	135.3	131.7	143.2	128.4	128.8	129.1	101.9	125.7	124.8	140.7	131.4	120.2	1,541
1974	141.0	129.4	130.9	126.5	142.6	121.5	112.8	144.0	143.7	156.8	136.4	113.8	1,599
1975	105.1	98.9	99.2	105.1	102.3	94.7	88.6	115.5	123.0	133.7	115.8	115.3	1,297
1976	116.3	123.3	136.1	125.7	123.4	123.3	103.4	120.7	127.4	137.4	128.0	125.2	1,490
1977	132.2	122.1	149.5	138.0	128.3	133.6	108.1	131.6	142.5	141.4	126.2	128.9	1,582
1978	122.5	115.0	125.2	122.5	117.4	121.6	99.5	125.2	124.9	140.4	130.9	123.4	1,433
1979	114.6	111.0	124.3	109.5	116.7	108.5	91.3	106.0	109.3	112.1	106.3	94.0	1,358
1980	97.3	84.9	90.0	83.8	84.1	77.2	68.2	79.5	95.6	103.0	92.5	92.0	1,070
1981	98.9	90.7	95.9	91.2	89.1	91.0	81.1	93.1	99.9	110.4	94.4	107.6	1,167
1982	93.9	84.4	90.9	88.3	82.1	84.5	73.0	90.7	87.9	95.3	83.2	83.1	1,066
1983													

[1] Represents total consumption of primary & secondary lead as metal, in chemicals, or in alloys. *Source: Bureau of Mines* T.365

U.S. Lead Recovered from Scrap (Lead Content) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	46.4	48.1	47.0	50.8	48.1	46.4	42.4	46.1	49.1	51.6	50.6	46.0	596.8
1972	45.3	41.8	54.2	51.9	55.0	50.4	48.9	49.6	51.4	49.5	51.6	45.4	616.6
1973	55.3	56.2	56.4	56.8	59.1	56.3	45.7	52.9	47.3	51.4	51.5	48.2	654.3
1974	50.3	54.8	54.9	50.9	53.7	46.4	47.0	49.2	54.3	58.4	56.4	56.8	698.7
1975	47.3	43.6	50.0	46.3	51.6	45.6	46.0	47.4	55.6	59.8	61.0	53.8	658.5
1976	52.0	55.1	64.6	57.0	53.5	57.8	49.8	57.4	56.1	58.4	64.9	57.3	726.6
1977	54.3	58.3	68.2	61.4	61.1	64.9	54.0	62.6	65.7	62.6	60.3	61.2	835.1
1978	54.7	56.4	63.7	57.8	64.3	62.1	54.1	62.6	68.5	71.2	70.1	67.6	753.1
1979[1]	54.6	60.5	65.1	64.1	62.0	65.2	51.3	58.1	58.2	65.0	60.7	54.3	801.4
1980[1]	59.2	55.4	59.6	59.1	51.2	57.1	46.0	52.2	56.0	50.2	58.1	54.9	675.6
1981[1]	46.5	43.9	43.8	42.4	44.1	46.7	46.4	49.1	52.5	50.9	52.2	48.7	641.1
1982[1]	45.5	48.2	48.0	47.6	46.1	44.8	34.4	44.2	41.9	44.6	41.9	41.5	528.8
1983													

[1] Preliminary. *Source: Bureau of Mines* T.366



Lumber and Plywood

Construction, particularly residential, is the major market for the solid-wood products industries. By late 1982, the housing industry, plagued by severely depressed housing starts (to the lowest level since World War II), began to show signs of revival. The value of wood products shipments then began to surge in 1983 as housing starts increased in response to signs of improvement in the general economy. New housing starts in 1983 were estimated to have reached 1.71 million units, nearly 60 percent over the 1.07 million starts for 1982 and nearly equal to the 1.76 million recorded four years earlier in 1979. By the end of 1983, shipments by the logging and other primary product segments of the wood products industries were estimated (in 1972 dollars) to have improved 12 percent from their 1982 level.

Wood products shipments in 1984, in constant dollars, are projected as increasing more than 6 percent above the excellent 1983 performance. Shipments of lumber in 1984 are expected to be up by 5 percent, and plywood and particleboard shipments are expected to improve by a like amount. Shipments from the logging industry in general in 1984 are projected as rising by 9 percent.

Lumber

The lumber industry is distributed widely throughout the U.S., with operations in nearly all 50 states. The West produces about 65 percent of the softwood lumber, and the South produces 27 percent. Approximately 80 percent of all lumber produced is from this softwood. Virtually all hardwood lumber is produced in the eastern half of the U.S. Residential construction is lumber's most important market. Other markets include furniture, repair and remodeling, and exports.

The sawmill industry in 1983 had come out of a 3-year depression in which lumber shipments had declined to only 27.2 billion board feet by the end of 1982. Encouraged by signs of an improving economy and of a return of consumer confidence, lumber producing firms returned to full shifts, lengthened their average workweek, reopened mills, and increased their hiring. Capacity utilization rates increased from a low of 50 percent in 1981 and early 1982 to as high as 94 percent by mid-1983. During the first 8 months of 1983, total lumber production was reported at 20.9 billion board feet, representing an increase of 23 percent over the comparable period in 1982. Shipments and order increased by 23 and 22 percent, respectively. Production for all of 1983 was finally estimated at 31.9 billion board feet, and shipments at 31.6 billion board feet, despite some slowing in demand during the last months of the year.

Strengthened by growth in the residential construction industry—the end-use market for more than 40 percent of the softwood lumber consumed—the softwood lumber industry began to expand rapidly early 1983. By the end of August, production had risen to more than 17 billion board feet, 25 percent above the similar period in 1982. By that time, shipments and orders were up 24 and 22 percent, respectively. Demand from other wood-using industries and activities, (including nonresidential, light commercial, repair and renovation, and highway and bridge and public works projects) increased moderately. Total demand for softwood, including exports, in 1983 was estimated at 25.5 billion board feet.

The latest figures reported by the Department of Commerce indicated that the annual rate of new private housing units started totaled 1.69 million units in the last month of 1983 compared with nearly 1.30 million as of the end of 1982. The summer peak in housing starts occurred in August, when the annual rate of starts was estimated by the Department of Commerce at 1.87 million units. Some slowing in the phenomenal growth in the housing starts rate (which had begun in 1982) was partly attributed to renewed fears of higher interest rates.

Historically, U.S. lumber imports have been responsive to U.S. residential construction levels. Imports increased in 1983, and preliminary data for the year estimated total imports at 11.4 billion board feet, an increase of about 21.3 percent from the 9.4 billion board feet imported during 1982. Lumber imports had been following a rising trend during the past several years. Imports were estimated to have accounted for 32 percent of total U.S. softwood lumber consumption in 1938. Canada supplied 97 percent of U.S. lumber imports in 1983—mostly softwood species, such as Douglas fir, Western pine and cedar.

U.S. lumber exports reversed the downtrend in 1981–82 and rose steadily during the first seven months of 1983. As of July, the total volume of lumber exports was reported at 1.4 billion board feet, up about 17 percent from the comparable 1982 period. However, shipments to foreign markets began to level off in the latter part of 1983. Shipments were estimated at 2.2 billion board feet for the year, exceeding the 1982 volume by about 9 percent.

Lumber industry shipments in 1984 are expected to increase by about 4.7 percent, reflecting improved residential construction. The volume of shipments of lumber is expected to rise to 33.1 billion board feet, also an increase of 4.7 percent over the 1983 level. All of the wood consuming markets are forecasting increased demand in 1984. Housing starts are being forecast at or above the 1983 level of 1.7 million units, and single-family units, which contain more lumber per unit than multifamily structures, may account for a larger share of total housing units in 1984. Lumber exports are expected to increase about 6 percent in 1984 due to improving foreign economies.

Plywood

Softwood plywood and veneer shipments also responded to the sharp recovery in residential housing construction during 1983 and increased 21 percent in value from their depressed 1982 levels. Softwood plywood production for 1983 was up an estimated 21 percent over 1982 with excess production over shipments going into inventory at the mills. Based on trends evident in National Forest Production Association (NFPA) monthly data, year-end 1983 stocks at the softwood plywood mills increased an estimated 150 million square feet, more than 50 percent higher than December 1982 inventories. According to the American Plywood Association, 40 percent of total softwood plywood volume went to new residential construction in 1983. Industry observers surmised that an apparent improvement in productivity contributed to the profitability of the softwood plywood industry during 1983. The turnaround from 1982's depressed levels in the softwood plywood industry accelerated in 1983. Softwood plywood shipments for 1984, excluding veneers, should reach 19 to 20 billion square feet (⅜ inch basis), an improvement of about 5 percent over 1982.

Particleboard

The quantity of particleboard shipped by all producers in 1983, estimated at 2.9 billion square feet, was 21 percent greater than the 1982 total. However, although particle-board shipments in 1983 returned to the 1980–81 levels, the industry recovery did not reach the peak of shipments achieved during 1972–79, which ranged from 3.3 to 3.6 billion square feet annually. About 86 million square feet of particleboard were exported to 43 countries. Half of these exports went to Canada. The 1983 export total was about 4 percent above total 1982 exports. Imports in 1983, estimated at 780 million square feet in quantity, were up 33 percent in value and 21 percent in volume compared to 1982. Canada supplied 92 percent of the 1983 particleboard imports.

Futures Markets

Western plywood futures are traded on the Chicago Board of Trade. Lumber futures are actively traded on the Chicago Mercantile Exchange.

Salient Statistics of Lumber in the United States

	Industrial Roundwood Used for										National Forest Stumpage Prices					
Year	Lumber	Pulp Products	Plywood & Veneer	Other Pdts.[2]	Total[2]	Imports	Exports	Apparent Consumption	Fuelwood Consumption	Apparent Prod. & Consum. All Pdt's.	All Eastern Hardwoods	Douglas Fir	Southern Pine	Western Hemlock	Ponderosa Pine	Maple
	In Million Cubic Feet										$ Per 1,000 Board Ft.					
1974	5,095	4,220	1,150	395	11,540	2,755	1,805	12,490	535	13,025	44.40	202.40	76.20	110.80	100.60	79.50
1975	4,980	3,485	1,165	385	10,575	2,220	1,685	11,105	570	11,675	34.00	169.50	57.00	68.80	71.20	39.60
1976	5,475	3,805	1,355	380	11,815	2,840	1,870	12,785	600	13,390	34.90	176.20	87.00	79.70	101.80	36.60
1977	5,730	3,645	1,425	385	11,960	3,310	1,795	13,475	1,030	14,505	37.90	225.90	100.30	89.30	131.40	41.20
1978	5,825	3,745	1,460	395	12,235	3,755	1,845	14,145	1,570	15,715	41.10	250.30	134.50	113.60	164.70	57.40
1979	5,680	4,110	1,370	405	12,510	3,655	2,135	14,030	2,270	16,300	46.80	394.40	155.20	200.80	239.00	33.90
1980	4,860	4,390	1,175	380	11,640	3,250	2,350	12,550	3,120	15,665	52.40	432.20	155.40	212.70	206.10	37.40
1981	4,460	4,130	1,195	360	10,800	3,160	2,145	11,815	3,510	15,325	50.90	350.20	172.00	163.40	195.20	41.50
1982[1]											56.40	118.20	127.20	44.50	66.90	34.30

[1] Preliminary, subject to revision. [2] Excludes fuelwood. Includes cooperage logs, poles & piling, fence posts, etc. *Sources: National Lumber Manufacturers Ass'n.: U.S. Dept. of Commerce; Forest Service* T.367

United States Lumber Shipments In Millions of Board Feet

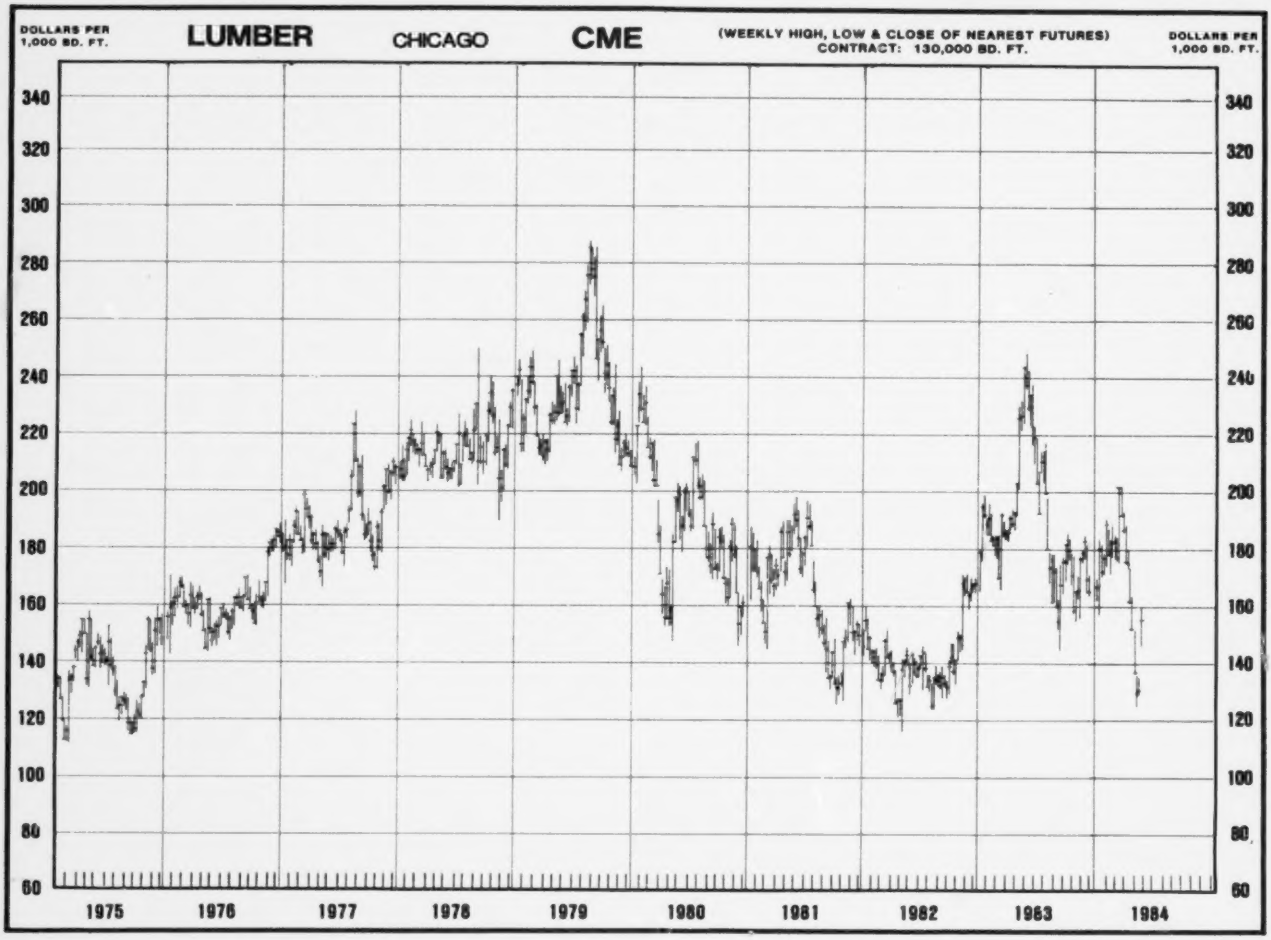
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	2,647	2,850	3,219	3,377	3,310	2,949	2,736	2,888	2,584	2,658	2,265	1,978	33,432
1975	2,047	2,164	2,507	2,843	2,820	2,739	2,820	2,851	3,061	3,097	2,689	2,647	31,769
1976	2,762	2,790	3,107	3,155	2,944	3,150	3,122	3,324	3,167	3,167	2,911	2,951	35,612
1977	2,683	2,873	3,362	3,364	3,314	3,387	3,077	3,358	3,296	3,269	2,859	2,983	37,899
1978	2,699	2,741	3,158	3,133	3,355	3,548	3,156	3,357	3,250	3,262	3,116	2,907	37,712
1979	2,813	2,756	3,279	3,107	3,329	3,087	3,128	3,408	3,106	3,224	2,777	2,589	36,514
1980	2,707	2,791	2,538	2,343	2,512	2,530	2,454	2,716	2,708	2,851	2,494	2,350	31,126
1981	2,424	2,379	2,752	2,755	2,633	2,765	2,395	2,431	2,260	2,382	2,045	1,989	29,491
1982	1,637	1,837	2,148	2,336	2,308	2,513	2,363	2,450	2,260	2,506	2,353	2,162	27,163
1983[1]	2,435	2,290	2,632	2,683	2,775	2,764	2,537	2,669	2,737	2,795	2,404		

[1] Preliminary. *Source: National Lumber Manufacturers' Association* T.368

Stocks (Gross) of Lumber in the United States, Beginning of Month In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1974	4,457	4,499	4,596	4,568	4,648	4,627	4,683	4,904	5,042	5,196	5,229	5,160
1975	5,134	5,137	5,123	5,064	5,000	5,052	5,124	5,101	5,165	5,090	5,140	4,982
1976	4,938	4,894	4,926	4,963	5,016	5,123	4,922	4,763	4,794	4,854	4,991	5,062
1977	5,086	5,171	5,228	5,325	5,197	5,133	4,964	4,854	4,787	4,859	4,876	4,855
1978	4,850	4,963	5,128	5,201	5,190	5,038	4,877	4,705	4,632	4,669	4,740	4,731
1979	4,795	4,811	4,932	4,964	4,975	4,868	5,003	4,893	4,843	4,875	5,063	5,207
1980	5,342	5,301	5,374	5,721	5,769	5,568	5,534	5,570	5,659	5,776	5,832	5,826
1981	5,805	5,883	6,065	6,098	6,123	6,213	6,015	6,103	6,232	6,284	6,285	6,075
1982	5,927	6,016	6,068	6,042	5,983	5,915	5,853	5,867	5,977	6,163	5,986	5,881
1983[1]	5,724	5,770	5,950	5,997	5,924	5,824	5,772	5,817	5,858	5,870	5,862	5,964

[1] Preliminary. *Source: National Lumber Manufacturers' Association* T.369



Month-End Open Interest of Lumber Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	7,523	8,770	8,202	8,390	9,233	8,362	7,730	8,078	7,551	7,365	6,547	8,122
1979	8,420	9,059	7,851	7,127	8,055	7,380	8,901	11,039	10,426	10,664	10,125	10,260
1980	10,839	10,587	9,948	10,130	11,452	11,736	12,461	11,644	13,734	14,251	12,829	9,338
1981	8,882	9,053	8,029	8,102	7,639	8,161	8,554	7,586	7,690	8,809	8,808	9,067
1982	9,328	8,982	6,990	7,460	6,578	5,648	4,629	5,789	6,088	8,282	10,490	9,915
1983	10,492	10,610	10,793	11,425	9,070	8,187	7,963	8,552	8,324	6,771	6,595	7,512
1984	8,673	8,614	8,973	8,810								

Source: Chicago Mercantile Exchange T.370

Volume of Trading of Lumber Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	47,910	43,703	46,876	43,759	42,578	36,330	38,252	46,138	49,347	55,495	54,371	55,739	560,498
1979	60,964	57,594	52,316	43,097	46,530	50,265	56,421	62,923	56,421	71,581	63,777	39,980	649,478
1980	59,063	61,288	73,412	86,057	81,960	68,528	76,296	65,740	73,660	76,984	59,076	58,376	838,676
1981	57,173	45,937	54,295	60,517	51,007	58,879	49,427	49,428	45,592	57,021	55,044	51,614	635,934
1982	51,268	45,193	44,717	44,116	40,828	47,512	34,624	35,432	29,835	47,761	51,046	44,387	516,619
1983	54,976	56,706	51,520	48,327	77,107	73,554	62,053	76,322	68,019	68,228	44,266	49,925	731,003
1984	51,570	70,031	57,075	68,314									

Source: Chicago Mercantile Exchange T.371

Residential Construction Contracts Awarded (All Types) in U.S. In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	1,631	1,818	2,729	3,168	3,310	3,485	3,357	3,255	3,196	3,171	3,001	2,997	34,714
1972	2,667	2,664	3,617	3,971	4,428	4,375	3,864	4,671	4,135	4,298	3,663	3,120	44,975
1973	3,195	3,277	4,643	4,512	4,754	4,612	4,224	4,233	3,638	3,673	3,299	2,341	45,696
1974	2,231	2,678	3,374	3,924	3,862	3,546	3,350	3,060	2,503	2,457	1,931	1,715	34,404
1975	1,540	1,532	2,272	2,987	3,072	3,116	3,081	2,833	2,951	3,167	2,478	2,259	31,261
1976	2,168	2,557	3,636	4,017	3,932	4,175	4,190	4,201	3,824	4,119	3,761	3,264	44,169
1977	2,967	3,519	5,328	5,503	5,803	6,043	5,703	6,198	5,641	5,534	5,359	4,340	62,017
1978	3,925	3,863	6,333	6,850	7,801	7,917	6,823	7,120	6,496	7,080	5,973	4,715	74,949
1979	4,530	4,588	6,984	7,185	8,084	7,309	6,882	7,075	6,184	6,808	4,704	4,173	74,557
1980	4,055	4,365	4,435	4,318	4,410	5,067	6,139	6,092	6,255	6,804	5,847	5,540	63,668
1981	4,227	4,167	5,957	6,617	5,855	5,805	5,810	4,726	4,704	4,718	3,648	3,677	60,164
1982[1]	2,991	3,045	4,600	4,656	4,984	5,602	5,144	5,414	5,525	5,629	5,628	5,401	59,210
1983[1]	4,970	4,775	7,762	7,667	8,235	10,158	8,471	9,257	8,644	8,221	7,575	6,482	92,217
1984													

[1] Preliminary. *Source: F. W. Dodge Co.* T.372

United States Imports of Sawmill Products In Millions of Board Feet

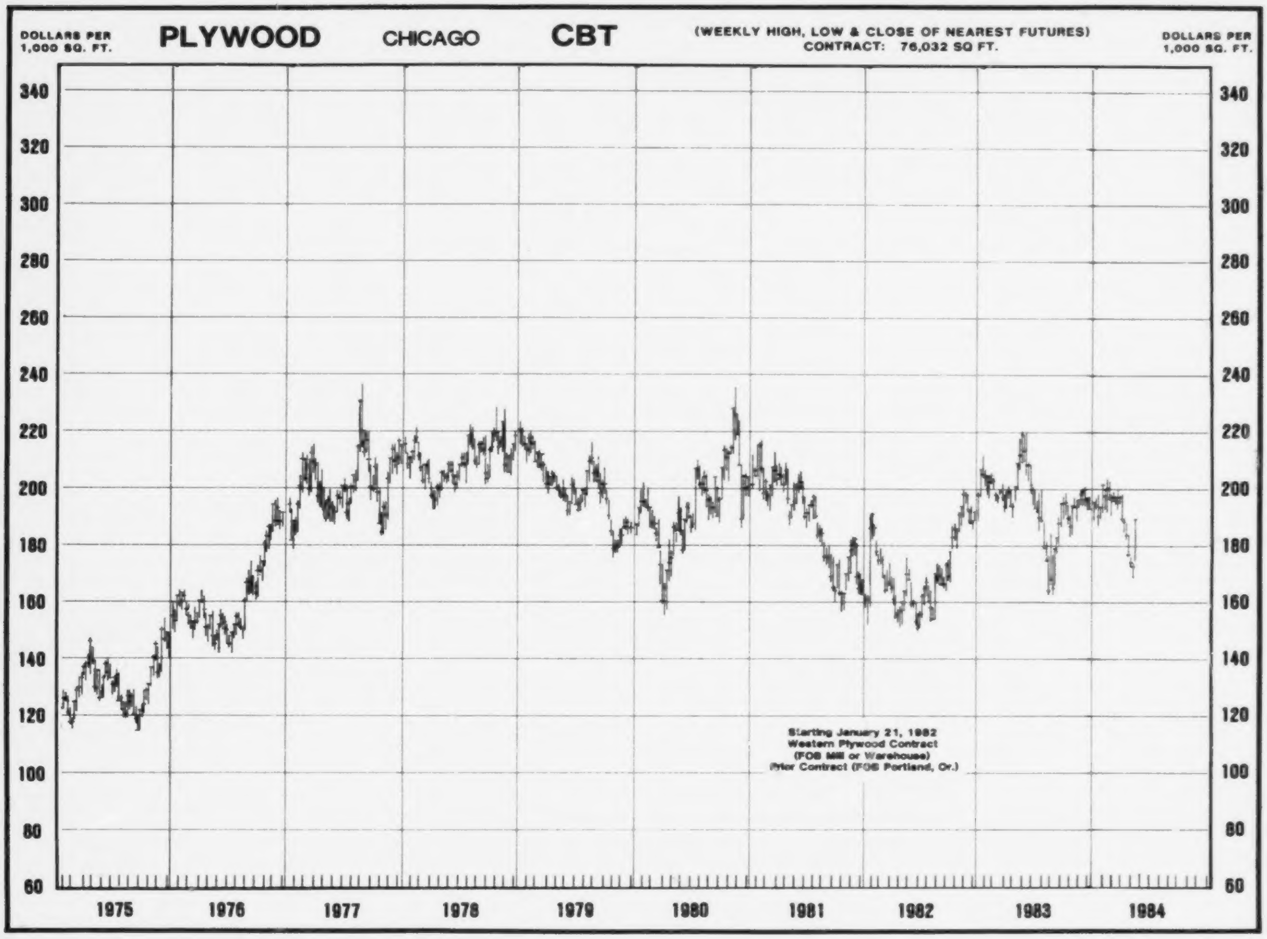
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	515	423	488	535	572	562	478	540	553	533	514	422	6,095
1971	505	473	683	563	650	761	767	624	797	516	582	679	7,599
1972	757	703	768	745	889	761	888	690	820	815	886	689	9,428
1973	935	760	883	837	931	899	823	623	453	764	780	640	9,540
1974	634	547	700	721	815	765	653	541	569	530	414	361	7,249
1975	337	377	536	571	589	671	677	431	422	388	415	552	5,968
1976	477	527	627	701	669	573	890	680	781	715	759	779	8,178
1977	691	721	906	890	996	999	934	920	938	858	956	911	10,698
1978	865	840	939	915	1,173	1,117	1,194	1,119	1,014	1,091	979	954	12,199
1979	925	761	998	925	1,237	1,011	1,010	1,043	999	924	909	771	11,513
1980	727	923	896	655	730	830	876	804	863	867	892	799	9,859
1981	756	848	966	980	992	934	842	465	660	755	728	591	9,518
1982	530	585	601	792	848	888	874	888	962	758	916	781	9,421
1983	879	933	1,055	885	1,153	1,099	1,048	1,090	1,057	1,118	1,092	885	12,294
1984													

Source: Department of Commerce T.373

Lumber Production[1] in the United States In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	2,794	2,983	3,339	3,451	3,168	3,384	3,194	3,220	3,242	3,199	3,028	2,924	36,693
1972	2,832	3,076	3,383	3,272	3,420	3,301	3,102	3,417	3,303	3,528	3,193	2,664	38,044
1973	3,012	3,074	3,456	3,272	3,290	3,207	3,038	3,456	3,250	3,453	3,057	2,710	38,297
1974	2,741	2,945	3,191	3,457	3,302	3,006	2,895	3,024	2,736	2,691	2,194	1,930	34,097
1975	2,072	2,148	2,480	2,779	2,849	2,814	2,797	2,914	2,986	3,147	2,530	2,500	31,583
1976	2,821	2,804	3,144	3,209	2,960	2,949	2,963	3,265	3,226	3,305	2,972	2,921	35,760
1977	2,822	2,930	3,388	3,260	3,253	3,160	2,975	3,290	3,368	3,268	2,839	2,944	37,667
1978	2,843	2,904	3,222	3,127	3,203	3,333	2,988	3,263	3,285	3,333	3,102	2,931	37,657
1979	2,877	2,877	3,306	3,119	3,219	3,143	3,018	3,355	3,131	3,412	2,914	2,631	37,061
1980	2,798	2,855	2,879	2,257	2,307	2,486	2,479	2,783	2,818	2,903	2,480	2,329	31,632
1981	2,523	2,542	2,818	2,780	2,651	2,588	2,483	2,554	2,307	2,379	1,831	1,765	29,592
1982	1,810	1,891	2,148	2,281	2,251	2,338	2,376	2,560	2,445	2,333	2,247	2,004	26,960
1983[2]	2,484	2,481	2,682	2,623	2,645	2,718	2,585	2,714	2,748	2,787	2,504		
1984													

[1] Adjusted with Census reports on lumber production. [2] Preliminary. *Source: National Lumber Manufacturers' Association* T.374



Month-End Open Interest of Plywood Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	7,272	7,996	6,638	5,740	6,733	6,507	6,069	6,634	4,882	5,228	4,585	4,484
1979	4,364	4,430	3,284	3,621	3,932	3,637	3,584	4,181	3,711	4,048	4,422	3,742
1980	3,316	3,196	3,260	5,416	5,017	5,097	3,974	3,685	3,987	4,210	4,133	3,468
1981	3,491	4,411	4,032	4,317	4,251	4,447	4,210	3,455	3,292	3,277	3,891	4,379
1982	4,465	3,794	3,788	2,839	2,628	2,268	1,434	1,448	1,350	1,671	1,776	2,141
1983	1,921	2,089	2,309	2,481	2,213	1,640	1,692	1,199	1,028	691	618	519
1984	589	355	275	130								

Source: Chicago Board of Trade

T.375

Volume of Trading of Plywood Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	Juiy	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	29,066	30,771	25,071	24,144	21,797	19,237	18,913	18,056	16,346	24,834	17,702	15,046	261,483
1979	18,102	16,761	13,070	9,364	10,836	12,574	9,389	11,543	11,150	14,958	10,053	9,220	146,570
1980	10,605	11,908	12,452	19,084	15,266	13,393	16,903	13,384	13,185	14,191	12,859	16,310	169,550
1981	13,282	14,439	17,667	20,894	15,858	20,131	11,441	11,439	8,651	12,965	9,433	14,612	144,318
1982	9,375	15,717	11,819	13,959	6,842	10,145	5,281	6,773	4,380	5,301	4,212	6,197	100,001
1983	6,918	5,767	5,027	5,688	5,914	6,257	2,333	5,283	2,167	2,691	916	1,463	50,424
1984	1,343	1,846	407	641									

Source: Chicago Board of Trade

T.376

LUMBER AND PLYWOOD

High, Low & Closing Prices of May Lumber Futures at Chicago In Dollars per 1,000 Board Feet

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	—	—	211.9	212.4	202.0	201.9	206.9	208.0	216.5	218.9	223.4	219.0	214.0	222.5	223.4
	Low	—	—	—	196.5	193.8	192.0	192.8	184.5	187.0	203.9	203.0	208.5	205.2	203.2	213.1	184.5
	Close	—	—	—	210.8	198.6	199.5	198.5	190.8	207.1	214.5	209.9	212.3	207.8	213.9	214.7	—
1979	High	—	—	—	189.0	193.0	195.5	206.5	211.0	202.5	210.9	219.8	234.5	228.3	231.2	246.0	246.0
	Low	—	—	—	181.6	183.5	187.0	192.5	200.5	185.1	187.2	201.7	218.5	209.8	209.4	223.1	181.6
	Close	—	—	—	183.3	192.0	192.7	202.0	201.3	194.6	209.9	217.6	223.4	211.8	225.2	245.2	—
1980	High	—	—	—	215.0	217.0	227.0	239.5	241.0	227.5	230.2	244.4	242.2	219.3	183.0	160.0	244.4
	Low	—	—	—	208.5	211.0	214.0	222.0	197.7	201.2	216.5	215.3	215.0	181.5	153.1	146.5	146.5
	Close	—	—	—	212.7	214.6	222.7	233.5	206.3	222.8	218.4	234.1	216.3	185.5	161.5	152.2	—
1981	High	221.0	210.2	222.0	225.5	233.5	222.0	215.5	214.0	220.0	210.7	205.2	198.3	181.4	190.4	181.0	233.5
	Low	176.0	164.0	202.0	210.6	218.0	191.9	195.3	194.2	205.7	175.5	185.3	169.5	164.3	163.2	167.1	163.2
	Close	178.1	204.5	220.8	218.5	219.1	196.9	198.5	207.4	208.5	194.5	195.8	169.8	169.6	178.4	175.5	—
1982	High	—	—	—	220.3	214.3	201.5	186.0	183.0	182.8	180.0	166.5	153.1	151.9	145.2	127.5	220.3
	Low	—	—	—	204.6	199.0	183.3	160.0	157.1	162.4	163.4	147.6	142.7	137.5	120.6	115.5	115.5
	Close	—	—	—	211.0	199.3	184.0	163.2	164.8	179.2	169.1	154.0	142.9	142.4	126.8	122.6	—
1983	High	192.7	186.5	178.4	171.0	168.5	170.9	169.3	179.6	191.7	195.3	209.5	206.6	194.6	193.6	221.7	209.5
	Low	180.0	172.0	170.0	151.5	154.8	155.2	157.6	157.9	178.6	181.1	189.8	190.7	183.8	182.7	191.5	151.5
	Close	185.0	174.0	175.5	157.5	158.6	166.0	159.7	178.7	185.9	191.0	204.9	190.7	184.6	193.2	217.2	—
1984	High	237.1	240.1	245.5	234.5	231.0	221.5	213.7	217.6	209.4	205.0	194.3	199.7	201.9	188.2		
	Low	228.8	228.6	222.9	221.0	214.0	200.4	195.3	198.5	196.8	189.5	184.0	182.0	186.0	148.2		
	Close	231.8	239.5	230.6	228.5	214.8	207.4	213.0	199.3	202.8	194.2	185.7	197.0	186.7	148.6		
1985	High	219.0	215.5														
	Low	214.0	185.6														
	Close	215.5	185.6														

Source: Chicago Mercantile Exchange T.377

High, Low & Closing Prices of May Plywood Futures at Chicago In Dollars per 1,000 Square Feet

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	217.5	215.5	202.9	212.5	212.5	212.8	210.5	214.8	214.0	220.0	221.9	222.5	212.0	201.8	206.1	222.5
	Low	209.5	199.0	194.0	196.0	194.0	190.0	197.5	190.9	192.6	208.1	206.0	208.1	195.5	191.5	199.2	190.0
	Close	213.5	200.0	196.1	209.5	202.5	207.8	206.0	192.4	213.3	219.5	212.0	210.5	196.8	199.0	203.3	—
1979	High	208.0	203.8	206.0	199.0	199.6	203.8	211.0	213.3	208.5	211.8	217.3	221.0	215.5	205.5	203.4	221.0
	Low	200.0	196.0	195.0	192.5	192.5	196.2	196.8	205.0	196.0	198.6	204.6	208.4	199.5	198.1	195.0	192.5
	Close	200.0	202.3	196.2	196.3	198.6	200.0	205.0	207.0	201.5	209.5	216.1	210.3	201.2	202.3	195.7	—
1980	High	205.5	208.9	206.4	204.0	202.0	201.0	201.7	203.5	192.0	197.5	206.0	203.9	194.9	182.0	193.5	208.9
	Low	203.2	203.0	201.0	198.0	195.0	195.5	194.0	181.1	183.5	189.0	188.5	188.5	165.5	155.2	170.5	155.2
	Close	203.8	206.0	204.2	201.0	198.5	197.3	199.0	184.5	190.1	193.5	200.7	191.6	172.4	171.5	192.5	—
1981	High	207.0	209.5	214.0	314.0	221.0	216.0	215.0	222.5	232.3	226.5	221.0	221.8	212.5	209.3	196.8	232.3
	Low	181.5	178.5	194.5	200.4	201.0	196.2	197.0	201.5	218.5	194.0	205.5	199.3	198.2	194.2	186.5	178.5
	Close	185.5	195.2	205.5	203.0	210.5	201.5	203.8	219.5	223.5	208.0	220.3	203.4	205.0	195.2	192.0	—
1982	High	—	240.5	239.0	240.0	228.0	224.0	220.0	212.6	214.3	214.0	190.0	180.0	183.6	169.0	164.5	240.5
	Low	—	200.0	224.0	228.0	216.0	205.0	200.0	194.0	199.2	196.8	180.0	174.0	162.5	151.0	152.1	151.0
	Close	—	231.0	239.0	232.0	218.0	210.1	200.5	200.0	213.3	199.6	180.0	175.0	165.7	156.5	164.5	—
1983	High	—	—	194.2	185.0	180.0	187.4	185.0	199.5	207.2	204.3	216.4	210.4	203.5	201.0	214.0	216.4
	Low	—	—	191.0	168.0	170.0	167.0	177.5	178.2	196.0	194.7	197.1	201.3	192.4	189.8	196.0	167.0
	Close	—	—	191.0	170.0	172.8	181.1	179.2	197.4	203.0	197.7	208.7	201.4	193.5	194.0	208.0	
1984	High	—	—	—	—	—	190.0	207.0	207.0	207.8	208.5	203.0	206.0	203.0	198.5		
	Low	—	—	—	—	—	187.5	188.9	196.1	197.5	199.3	189.0	195.8	195.0	173.0		
	Close	—	—	—	—	—	188.2	205.0	196.1	202.6	199.3	196.1	198.8	197.5	173.5		

Source: Chicago Board of Trade T.378

Average Index Price of Softwood Plywood—Western $ per Ths. Board Feet[1] 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	513.09	513.09	513.09	513.09	506.11	506.11	506.17	501.27	501.27	501.27	497.60	494.66	505.56
1976	494.90	494.90	500.54	502.99	502.99	502.99	502.99	507.89	510.34	510.34	510.34	517.69	504.91
1977	530.06	536.18	559.46	584.20	589.10	598.54	609.56	609.56	643.13	650.48	653.78	677.06	603.43
1978	710.01	741.86	740.64	779.84	795.76	812.18	812.42	812.42	852.72	852.72	869.32	874.47	804.53
1979[1]	354.3	351.7	351.5	345.6	329.8	304.1	319.1	324.3	327.6	327.4	309.4	300.4	328.8
1980	293.8	308.0	302.3	256.9	275.4	301.7	324.5	346.2	324.0	324.2	330.3	343.3	310.9
1981	326.4	330.0	323.3	332.2	319.7	329.4	322.1	311.0	301.9	283.7	286.7	296.7	313.6
1982	291.3	288.4	288.7	283.5	279.2	287.6	282.3	278.8	274.9	272.52	276.5	284.6	282.4
1983	292.0	299.9	302.3	302.3	304.4	327.5	325.4	314.4	302.3	307.1	303.8	308.2	307.5
1984	312.3	320.0											

[1] Prior to 1979 prices are for Lumber Redwood, Boards, Clear, F.G., Dry in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics* (0831–01) T.379

Average Index Price of Softwood Yellow Southern Pine (Dressed) Flooring[1] (C & Better) 1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	341.37	341.37	344.63	344.63	346.27	344.63	336.47	336.47	336.47	329.93	331.57	333.20	338.92
1976	339.73	341.37	346.27	346.27	346.27	346.27	348.55	351.17	354.43	355.09	356.07	356.07	348.96
1977	356.07	356.07	359.33	362.60	364.23	367.50	375.67	380.57	387.10	388.73	392.00	395.27	373.76
1978	400.17	403.23	406.87	405.07	409.97	409.97	413.23	419.11	421.40	424.01	424.67	426.30	413.67
1979[2]	307.0	306.4	315.7	319.0	315.8	315.2	320.7	333.7	343.6	344.4	341.1	328.2	324.2
1980	322.0	322.2	317.2	281.2	280.1	287.3	296.4	304.1	295.1	282.3	286.9	293.7	322.2
1981	291.9	292.2	294.7	308.4	313.9	309.5	297.0	291.6	279.4	273.6	267.0	279.7	291.6
1982	278.0	273.3	273.9	285.3	283.1	298.4	305.1	288.6	287.5	279.3	284.1	293.4	285.8
1983	303.0	314.8	319.3	321.3	325.5	334.9	330.0	323.4	308.3	313.5	315.9	325.5	319.6
1984	333.7	337.4											

[1] Flooring. C and better, F. G., 1″ × 4″ × S/L. [2] Prices prior to 1979 are in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics* (0811–02) T.381

Average Index Price of Ponderosa Pine[1] Softwood Lumber—No. 2 Dec. 1980 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	126.78	132.83	150.35	154.31	173.62	170.71	145.95	141.17	131.78	128.87	127.30	—	131.97
1976	154.01	177.50	198.52	209.92	189.73	165.91	161.57	168.63	182.50	198.68	198.57	206.15	184.31
1977	227.16	232.18	245.58	251.21	239.98	216.44	219.96	232.57	236.48	235.28	215.40	226.17	231.53
1978	247.58	263.85	264.90	267.57	240.07	251.25	232.33	236.92	254.23	267.17	N.A.	317.01	237.07
1979	304.49	332.11	366.87	371.17	342.59	338.16	306.16	301.95	309.48	316.41	277.35	240.42	317.26
1980	252.62	291.36	314.97	242.34	215.48	252.06	310.05	327.35	304.06	293.25	306.22	340.83	287.55
1981[2]	102.9	102.3	103.7	107.8	111.2	110.4	106.9	103.6	100.0	93.0	90.6	93.4	102.2
1982	N.A.	95.0	97.6	99.0	97.7	97.3	98.3	95.6	91.7	87.9	86.1	90.8	94.5
1983	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	103.8	88.3	90.1	N.A.	92.3	90.2
1984	93.6	101.3											

[1] No. 3 1″ × 12″, B.L. (6′ and over). [2] Prices prior to 1981 are for Ponderosa Pine in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics* (0811–0312.99) T.380

Average Index Price of Douglas Fir Softwood Lumber—Dimension, Construction, Dried, 2″ × 4″, R.L.[1] 1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	138.41	146.90	147.29	156.60	169.67	161.54	165.47	169.77	166.79	160.09	157.56	166.40	158.88
1976	175.43	178.29	184.90	180.05	176.06	171.45	187.49	195.59	215.08	207.79	204.02	218.77	191.24
1977	228.38	225.50	232.09	226.05	225.42	213.79	230.93	242.51	256.92	237.27	218.03	227.70	230.38
1978	238.08	241.81	246.28	238.48	238.48	245.28	245.00	272.06	274.74	266.66	271.51	262.40	253.39
1979[2]	357.2	360.1	371.0	381.1	381.8	378.3	387.4	408.4	424.0	410.4	378.7	368.8	383.9
1980	363.3	367.1	358.8	327.1	329.6	353.2	358.7	360.0	357.1	354.5	352.9	353.4	353.0
1981	347.2	330.4	321.8	332.7	328.5	333.1	320.1	318.3	296.8	277.6	268.0	267.0	311.8
1982	269.1	262.2	258.5	265.6	262.1	271.8	277.8	268.9	269.6	261.8	259.9	272.5	266.6
1983	312.1	370.3	376.2	375.5	390.2	404.7	407.0	381.4	345.3	332.0	327.8	336.4	363.7
1984	322.8	351.7											

[1] Dried, S4S, mixed carlots, f.o.b. mill, rail shipment. [2] Prices prior to 1979 are in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics* (0811–01) T.382

Magnesium

World production of magnesium metal in 1983 was around 5 percent larger than in 1982, and U.S. production of primary magnesium metal was 13 percent higher than in 1982, according to preliminary data of the U.S. Bureau of Mines. In the first half of 1983, the U.S. industry operated at about 50 percent of its annual rated capacity of around 185,000 short tons, but for the full year it operated at about 60 percent of capacity. Domestic magnesium metal production is derived from natural brine solutions or the mineral dolomite.

Total U.S. shipments of the metal in the fourth quarter of 1983 were slightly higher than in the third quarter, and producers' stocks of the metal continued to decline, according to the Bureau of Mines. The manufacture of aluminum-base alloys accounted for an estimated 53 percent of magnesium metal used in the U.S. in 1983; castings and wrought products—18 percent; reducing agent—8 percent; cathodic protection—8 percent; manufacture of nodular cast iron—3 percent; and other uses—10 percent.

The U.S. remained a significant net exporter of magnesium in 1983. Total exports in 1983 were 18 percent higher than those for 1982, and consisted mostly of metal and alloys in crude form and scrap. Magnesium imports picked up in the fourth quarter of 1983, and for the year were 25 percent above those for 1982.

There was no National Defense stockpile goal or inventory for magnesium metal in 1983. Resources from which magnesium metal may be recovered are virtually unlimited and are globally widespread. Moreover, aluminum and zinc may be substituted for magnesium castings and wrought products.

The quoted prices for magnesium rose from $1.34 per pound for magnesium metal and $1.21 per pound for diecasting alloy at the beginning of 1983 to $1.38 and $1.23 per pound, respectively. However, two producers reportedly increased their primary metal price to $1.43 in mid-December for spot customers and on January 3, 1984 for contract customers. Dow Chemical Co. was expected to increase its price for diecasting alloy to $1.28 per pound in early January 1984.

World Production of Magnesium (Primary) In Short Tons

												Secondary Production	
Year	Canada	China	France	India	Italy	Japan	Norway	USSR	United States	Yugoslavia	World Total[1]	Japan	Un. Kingdom[3]
1972	5,924	1,100	7,550		8,335	12,004	40,149	60,000	120,823		255,960		
1973	6,840	1,100	9,511		9,850	12,349	41,360	63,000	122,431		266,441		
1974	6,535	1,100	7,199		8,191	9,836	43,866	66,000	N.A.		142,727		
1975	4,217	1,100	8,303		6,993	9,412	42,259	66,000	N.A.		138,284		
1976	6,715	5,500	8,857	33	9,740	12,335	42,778	69,000	119,957	—	274,882		3,000
1977	8,414	5,500	9,570	—	9,663	10,379	42,070	72,000	125,958	—	283,554		3,000
1978	9,159	6,600	9,370	25	10,668	12,304	43,166	77,000	149,463	0	317,755	12,057	3,000
1979	9,937	6,600	9,968	31	9,653	12,531	48,697	79,000	162,464	0	338,881	18,058	3,000
1980	10,199	7,700	10,282	14	8,693	10,199	48,890	83,000	169,477	0	348,454	23,800	3,000
1981[2]	9,370	7,700	8,006	7	8,623	6,247	52,472	86,000	143,230	4,254	325,909	31,345	2,094
1982[1]	8,700	7,700	10,593	6	8,466	6,123	38,581	89,000	99,100	4,400	272,669	24,000	1,938
1983[1]	9,000	8,000	11,000		9,000	7,000	40,000	89,000	110,000	4,000	287,000		
1984													

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

T.383

Salient Statistics of Magnesium in the United States In Short Tons

	Production								Domestic Consumption of Primary Magnesium				
		Secondary							Structural Products				
Year	Primary (Ingot)	New Scrap	Old Scrap	Total	Exports[2]	Imports for Consumption	Stocks Dec. 31[3]	$ Price per Pound[4]	Castings	Wrought	Total	Other Uses[5]	Total
1972	120,823	12,639	2,989	15,628	17,556	4,479	23,011	.37¼	10,762	12,947	23,709	79,982	103,691
1973	122,431	13,535	4,101	17,636	39,585	3,325	18,894	.37¼	12,137	12,965	25,102	90,672	115,774
1974	N.A.	9,155	5,719	14,874	46,398	5,305	23,000	41¼–.75	14,176	13,348	27,524	102,524	130,048
1975	120,203	18,090	9,783	27,873	32,591	7,903	19,664	.82	9,488	9,666	19,154	75,013	94,167
1976	119,957	19,024	11,529	30,553	13,444	14,907	17,295	.87–.92	7,051	10,241	17,292	87,161	104,453
1977	125,958	20,170	12,524	32,694	28,061	5,964	11,838	.96–.99	7,201	12,632	19,833	83,743	103,576
1978	149,463	22,135	14,093	36,228	41,807	6,668	12,583	.99–1.01	7,651	11,075	18,726	90,232	108,958
1979	162,464	23,340	13,882	37,222	54,280	4,754	13,901	1.01–1.09	7,460	11,562	19,022	89,822	108,844
1980	169,477	22,907	17,554	40,461	56,761	3,757	14,393	1.07–1.25	5,847	11,620	17,467	78,321	95,788
1981	143,230	22,073	24,183	46,256	34,855	6,897	11,367	1.25–1.34	4,951	10,376	15,327	76,134	91,461
1982[6]	99,100	19,801	23,431	43,232	39,613	4,784	10,268	1.34	3,600	10,128	13,728	60,871	74,599
1983[1]	112,000			45,000	46,689	6,350		1.34–1.38					70,000
1984													

[1] Estimate. [2] Metal & alloys in crude form, & scrap. [3] Consumers' stocks of primary magnesium. Gov't. agencies continue to hold quantities of primary magnesium. [4] Magnesium ingots (99.8%) f.o.b. Valasco, Texas. [5] Distributive or sacrificial purposes. [6] Preliminary. *Source: Bureau of Mines*

T.384

Manganese

World mine production of manganese in 1983 was about 11 percent smaller than in 1982, according to an estimate by the U.S. Bureau of Mines. The USSR continued as the world's largest producer, accounting for 46 percent of estimated output but it no longer supplies manganese to market economy countries. Production in the Republic of South Africa, the second largest producer, was cut by 48 percent in 1983. Manganese continued in oversupply worldwide in 1983 and prices declined further for ore and were also weak for ferroalloys.

The U.S. produces no managanese and scrap recovery specifically for manganese is insignificant. Net import reliance is estimated at 99 percent of apparent U.S. consumption of manganese. Imports of manganese ore (35% or more Mn) by the U.S. in 1983 totaled 368,297 short tons (gross weight), 55 percent greater than in 1982. Sharp increases occurred in imports from Gabon, Brazil, and Mexico. U.S. imports of ferromanganese dropped 29 percent in 1983 from the 1982 level of 478,317 short tons (gross weight), primarily reflecting a sharp reduction in imports of high carbon manganese from the Republic of South Africa. France was the largest supplier of high carbon ferromanganese to the U.S. in 1983.

U.S. consumption of manganese ore in 1983 amounted to 492,977 short tons, according to preliminary date of the Bureau of Mines, more than double the exceptionally low consumption of 1982. Consumption of high carbon manganese totaled 354,907 tons in 983, only slightly larger than in 1982. Consumption of silicomanganese at 75,819 tons was 17 percent lower than a year earlier. Domestic consumption of spiegeleisen, an iron-base composition with about 20 percent manganese, is now negligible, and its domestic production ceased a number of years ago. End uses of manganese in 1983 were estimated to be construction—23 percent; transportation—17 percent; machinery—14 percent; and other uses—46 percent.

The General Services Administration (GSA) continued to sell stockpile excesses throughout 1983. Meanwhile, the GSA solicited bids for upgrading 100,000 tons of stockpiled ore into high-carbon ferromanganese to improve stockpile readiness and to maintain domestic ferroalloy capacity. Accordingly, in late December 1983, the GSA awarded a $9.8 million contract to Elkem Metals Co. for converting about 48,000 tons of metallurgical manganese ore in the National Defense Stockpile into high carbon ferromanganese.

U.S. industry stocks of manganese ore at the end of 1983 amounted to 469,029 short tons versus 624,353 tons at the end of 1982.

World Production of Manganese Ore In Thousands of Short Tons

Year	Australia	Brazil	Chile	China	Gabon	Ghana[3]	Hungary	India	Japan	Mexico	Morocco	South Africa	USSR	Zaire (Congo)	World
% Mn	37–53	38–50	33–40	20+	50–53	30–50	30–33	10–54	24–28	35+	50–53	30–48+	35	30–57	Total
1977	1,531	1,671	19.8	1,250	2,040	321.4	132.0	2,056	139.1	536.4	125.2	5,564	9,470	42.2	25,210
1978	1,386	2,113	25.6	1,400	1,885	347.9	126.0	1,785	114.8	576.7	139.1	4,759	9,984	—	24,959
1979	1,900	2,490	27.5	1,650	2,535	300.0	91.0	1,935	96.9	543.1	149.6	5,713	11,292	—	28,962
1980	2,226	2,515	30.5	1,750	2,366	278.3	97.0	1,814	87.7	492.9	144.8	6,278	10,750	18.3	29,061
1981[1]	1,597	2,251	28	1,760	1,640	248	78.0	1,682	96	637	121	5,555	10,090	34	25,952
1982[2]	1,248	1,433	26	1,760	1,667	146	102	1,596	90	561	104	5,750	10,140	4	24,754
1983[2]	1,300	1,400		1,700	2,100			1,400				3,000	10,200		22,000

[1] Preliminary. [2] Estimated. [3] Dry weight. *Source: Bureau of Mines* T.385

Salient Statistics of Manganese in the United States In Thousands of Short Tons (Gross Weight)

		Manganese Ore (35% or More Mn)						Ferromanganese						Spiegelesien	
		Consumption by Use										Manganiferous Ore[3]			
Year	Net Import Reliance as a % of Apparent Consumption	Alloys and Metal	Pig Iron Steel	Dry Cells, Misc.	General Imports	Consumption	Stocks, Dec. 31[2]	Domes. Production	Imports for Consumption	Exports	Consumption	Production	Value Mil. $[4]	Stocks Dec. 31[2]	Consumption
1977	98	926.6	200.8	231.4	931	1,359	1,626	334.1	534.4	6.1	886.3	215.9	2.2	.1	6.8
1978	97	832.2	219.7	229.6	548	1,281	1,174	272.5	680.4	9.4	985.6	312.1	3.1	.1	4.0
1979	98	913.5	230.7	228.0	500	1,372	1,098	317.1	821.2	25.3	976.5	240.7	2.9	.1	3
1980	98	727.5	131.5	211.7	698	1,071	1,030	189.5	605.7	11.7	789.1	173.9	2.4	—	.3
1981	98	744.8	147.8	184.0	639	1,077	1,036	192.7	671.2	14.9	820.9	174.8	2.9	—	.1
1982[1]	99	412.3	83.9	112.6	238	609	751	119.0	492.7	10.3	439.2	31.5	.3	—	.1
1983[5]	99				178	493	469		266.4	8.4	433.4				

[1] Preliminary. [2] Including bonded warehouses; excludes Gov't stocks; also excludes small tonnages of dealers' stocks. [3] 5 to 35% Mn. [4] Combined value for total Manganese ore & Manganiferous ores. [5] Estimate. *Source: Bureau of Mines* T.386

MANGANESE

Manganese Ore (35% or More Mn) Imported[2] into the U.S. In Thousands of Short Tons (Mn Content)

Year	Angola	Zaire	Brazil	Congo (Brazz.)	Canada	Ghana	India	Mexico	Morocco	Gabon	Australia	Turkey	South Africa	Total	Value Mill. $
1974	—	25.3	222.0	—	—	4.5	—	16.4	27.5	150.1	114.0	—	32.9	593	45.1
1975	—	11.4	307.4	—	—	—	—	23.2	—	244.8	86.5	—	92.2	766	77.1
1976	—	2.9	161.1	13.3	—	—	—	18.5	18.7	256.4	117.4	—	61.0	649	73.6
1977	—	14.7	111.6	—	—	—	—	34.9	17.1	245.2	13.8	—	16.9	454	56.4
1978	—	13.2	52.1	9.5	—	—	—	18.4	14.5	127.0	32.6	—	11.0	278.2	33.6
1979	—	—	51.7	22.5	—	—	—	2.1	10.7	49.2	55.3	—	52.1	243.6	27.5
1980	—	—	33.6	—	—	—	—	18.6	5.3	79.9	106.0	—	86.4	329.8	46.4
1981	—	—	38.9	—	—	—	—	25.8	13.6	90.6	34.3	—	97.5	300.7	42.6
1982	—	—	3.0	—	1.7	—	—	1.5	5.0	23.2	18.8	—	57.9	111.1	16.2
1983[1]			39.1					25.6	—	85.5	15.1	—	12.7	178.1	

[1] Preliminary. [2] Imported for consumption. *Source: Dept of Commerce* T.387

United States General Imports[1] of Manganese Ore In Thousands of Long Tons—Manganese Content

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	56	41	81	27	57	76	61	50	94	92	103	112	851
1975	79	40	108	138	116	84	77	88	51	112	43	98	1,033
1976	101	39	83	68	53	161	45	134	87	75	93	114	1,053
1977	71	53	29	48	121	119	62	87	110	49	21	64	884
1978	94	50	113	50	71	55	82	42	97	62	64	63	842
1979	62	50	60	57	85	122	61	34	85	53	105	76	850
1980	109	56	54	66	97	68	54	67	60	38	57	69	795
1981	22	76	55	70	111	78	68	55	72	51	67	49	775
1982	65	49	65	55	22	58	35	33	14	25	32	15	477
1983	61	29	37	20	38	45	50	28	46	56	39	35	454
1984													

[1] General imports of ore, concentrates manganiferous ore, manganese alloys & metals. *Source: Department of Commerce* T.388

Production of Ferromanganese in U.S., & Materials Used in Its Manufacture

Year	Ferromanganese Produced			Silico-Manganese Production (Gr. Wt.) Sh. Tns.	Materials Consumed (Short tons)			
		Manganese Contained			Manganese Ore		Manganese Ore Used Per Ton of Ferromanganese & Silicomanganese	Ferromanganese Made
	Short Tons	Per Cent	Short Tons		Foreign	Domestic		
1974	544,361	78.0	424,405	196,000	1,348,425	55,822	1.8	2.5
1975	575,809	78.9	454,309	143,000	1,389,300	48,011	1.9	2.4
1976	482,662	79.0	381,328	129,000	1,208,336	53,632	2.0	2.5
1977	334,134	78.8	263,136	120,000	889,296	35,769	1.9	2.6
1978	272,530	80.6	219,707	142,000	740,906	90,660	1.9	
1979	317,102	80.2	254,389	165,000	785,664	125,130	1.8	
1980	189,472	79.7	150,982	188,000	691,250	34,877	1.9	
1981	192,690	80.0	154,156	173,000	684,857	57,722	2.0	
1982[1]	119,000	82.0	97,500	69,000	412,000		2.2	
1983[1]	100,000							

[1] Preliminary. *Source: Bureau of Mines* T.390

Average Price of Ferromanganese[1] (78% Mn-F.O.B. Plant) In Dollars Per Gross Ton—Carloads

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	200	200	200	270	270	294¾	315	333⅓	350	350	350	440	297.76
1975	440	440	440	440	440	440	440	440	440	440	440	440	440.00
1976	432½	432½	432½	432½	432½	432½	432½	432½	432½	432½	425	417½	430.63
1977	417½	417½	417½	399½	399½	399½	399½	399½	399½	399½	399½	399½	404.00
1978	399½	399½	399½	399½	422.17	425	425	425	425	425	425	425	416.26
1979	440	440	440	465	490	490	490	490	490	493.48	510	510	479.04
1980	510	510	510	510	510	510	510	510	510	510	510	510	510.00
1981	510	510	510	510	510	510	510	510	510	510	510	510	510.00
1982	510	510	510	510	510	510	510	510	510	510	510	510	510

[1] Domestic standard. *Source: American Metal Mkt.* T.389

Margarine

Salient Statistics of Margarine in the United States In Million Pounds (Actual Weight)

				Domestic Disappearance[2]		Materials Used in Manufacture of Margarine								
Year	Stocks Jan. 1	Production	Exports & Shipments	Total	Per Person in lbs.	Coconut Oil	Cotton seed Oil	Soybean Oil	Peanut Oil	Corn Oil	Lard & Beef Fats	Safflower Oil	All Other Edible Oil	Total Primary & Secondary Fats & Oils
1975	64	2,399	17	2,386	11.0	20	46	1,568	1	188	52	7	38	1,917
1976	60	2,628	20	2,601	11.9	4	51	1,671	38	218	44	10	58	2,091
1977	67	2,535	20	2,502	11.4	5	44	1,585	15	243	80	8	48	2,026
1978	80	2,520	31	2,499	11.2	7	42	1,593	—	211	74	10	27	1,997
1979	70	2,553	25	2,517	11.2	4	25	1,643	—	222	86	5	12	2,016
1980	81	2,593	24	2,576	11.3		25	1,651	—	222	104			2,036
1981	74	2,577	17	2,573	11.2		25	1,685		213	78			2,017
1982[1]	61	2,596	13	2,582	11.1		21	1,718		220	29			1,997
1983[3]	62						31	1,615		217	31			1,906
1984[1]	56													

[1] Preliminary. [2] Civilian & military. [3] Estimate. *Source: Bureau of Census* T.391

United States Production of Margarine In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	211.0	201.2	198.7	181.7	183.0	180.6	173.7	178.7	216.6	212.8	219.7	241.6	2,399
1976	265.1	259.6	225.8	198.8	190.5	199.8	197.4	195.1	202.8	215.6	233.2	246.0	2,630
1977	242.3	236.5	232.7	197.3	178.8	179.8	164.8	198.2	209.1	221.8	229.0	244.7	2,535
1978	219.8	224.6	243.0	186.8	183.7	194.6	166.0	200.6	207.6	222.2	220.6	250.0	2,520
1979	233.1	214.8	242.9	186.8	197.5	193.0	188.3	199.0	205.9	225.8	224.6	241.5	2,553
1980	235.8	228.7	231.6	184.5	200.5	214.6	192.1	186.9	213.2	221.9	218.4	264.6	2,593
1981	235.5	214.4	231.6	196.3	182.1	214.3	184.7	192.5	223.3	220.9	232.6	248.2	2,576
1982	221.5	237.7	236.7	191.8	189.8	206.5	182.3	193.8	229.2	221.8	236.5	248.4	2,596
1983[1]	209.0	221.8	225.1	184.1	192.8	205.5	161.3	192.9	219.4	210.4	202.2	226.7	2,451
1984[1]	215.9	212.4	209.9										

[1] Preliminary. *Source: Bureau of the Census* T.392

Stocks[1] of Margarine in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1975	64.3	65.6	72.5	65.8	75.8	64.4	63.6	66.6	52.6	58.6	60.2	64.8
1976	60.1	67.0	82.1	101.1	70.2	71.4	70.8	73.6	80.0	72.4	72.2	69.8
1977	67.2	67.4	70.7	71.8	77.3	91.0	81.0	73.7	68.6	58.9	74.0	70.0
1978	79.9	61.8	70.2	59.3	72.3	63.4	68.8	67.8	60.3	66.0	69.9	58.9
1979	69.5	66.8	82.1	67.5	77.3	75.2	78.3	68.7	77.1	72.7	81.6	64.9
1980	80.5	71.6	80.0	73.2	69.5	62.5	74.7	78.3	60.7	66.1	80.0	71.4
1981	74.2	62.2	68.3	76.8	66.1	74.2	87.0	79.8	87.7	75.4	62.5	64.2
1982	61.0	62.2	66.8	64.3	60.5	67.5	65.0	59.6	68.7	68.4	80.9	83.4
1983[2]	62.1	62.7	64.0	76.5	62.7	62.1	58.2	62.8	58.8	52.3	56.9	66.0
1984[2]	55.5	61.9	79.5	71.0								

[1] Producers' and warehouse. [2] Preliminary. *Source: Bureau of the Census* T.393

Average Wholesale Price of Margarine, Yellow, Quarters, F.O.B. Chicago[1] In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	41.8	41.5	39.3	41.5	39.5	39.3	39.2	38.1	36.0	34.3	33.5	31.3	37.9
1976[1]	31.0	31.0	31.0	31.0	30.7	30.0	31.8	30.0	32.0	32.0	33.0	33.0	31.4
1977	33.8	34.0	39.5	42.5	44.3	43.9	42.4	40.3	38.5	37.4	36.9	36.1	39.1
1978	36.6	36.7	41.0	43.6	42.0	40.6	37.8	37.3	41.6	41.3	40.1	39.6	39.8
1979	40.3	41.3	42.3	41.4	40.6	41.1	42.6	42.3	43.9	42.4	37.9	42.1	41.5
1980	39.8	38.3	39.0	35.6	34.8	36.1	40.3	40.0	40.3	39.3	40.3	40.2	38.7
1981	35.8	35.9	37.1	38.2	36.6	37.7	39.4	39.0	37.4	36.9	36.9	36.9	37.3
1982	37.0	37.6	38.3	39.0	40.2	40.0	39.0	38.4	38.0	38.0	38.0	38.0	38.5
1983	38.0	38.0	38.0	38.0	38.0	38.0	38.0	41.2	44.0	42.0	40.5	39.7	39.5
1984	41.5	41.0	42.0										

[1] Prices prior to 1976 are for WHITE (DOMESTIC VEGETABLE). *Source: Department of Agriculture* T.394

Meats

Figured on a retail weight basis, total U.S. red meat and poultry consumption in 1983 was a record-large 209.6 pounds per person. This was 6 pounds above the 1982 consumption and 1 pound above the 1980 record. In 1983, consumers purchased nearly 79 pounds of beef, 62 pounds of pork, 52 pounds of broilers, and 11 pounds of turkey per person. The consumption of both broilers and turkeys was record-large during 1983. Beef consumption was the highest since 1978. Pork consumption rose 3 pounds from 1982. However, the consumption of veal, lamb, mutton, and mature chickens was virtually unchanged from a year earlier.

The increased consumption of meats during 1983 was an outcome of both economic recovery and falling prices for meats. Retail meat prices, as measured by the BLS retail price index, declined 1 percent in 1983 compared to the Consumer Price Index for all items which rose 3.2 percent for the year. During 1983, retail prices for pork declined nearly 3 percent from the 1982 average, and prices for Choice beef declined nearly 1 percent. Cutbacks in breeding herds of both hogs and beef due to higher grain prices, drought, and poor returns during fourth-quarter 1983 resulted in larger meat supplies and the lowest prices since early 1981 for beef and early 1982 for pork. At the same time, poultry production near year-earlier levels in the second half of 1983 tended to strengthen poultry prices.

The 1979 Meat Import Law empowers the USDA to calculate at the beginning of each year a meat import level that would "trigger" the imposition of meat import quotas on beef, veal, mutton, and goat meat. Early in 1984, tentative USDA figures estimated calendar 1983 meat imports subject to the import law at 1.238 billion pounds, or 7 million above the 1983 trigger level of 1.231 billion. The 1984 trigger quota level was set at 1.228 billion pounds. The USDA's initial quarterly estimate of U.S. meat imports in 1984 was 1.117 billion pounds. Imports of meat into the U.S. in 1984 were expected to be lower than a year earlier because of declining meat prices and an increase in cow slaughter due to a lowering of milk price support at the end of 1983. Officials of the U.S. meat industry and meat exporting countries subsequently complained that the USDA had overestimated 1984 cow slaughter in figuring the quota trigger level, however, as of the first quarter of 1984, USDA had decided against revising the trigger.

In the second half of 1984, supplies of fed beef are expected to decline 1 to 3 percent at the same time that non-fed beef supplies fall fairly sharply. This could result in a widening of the farm-to-retail beef price spread to over $2.40 per pound compared to around $1.02 per pound a year earlier. Retail beef prices are expected to average between $2.47 and $2.52 in the second half of 1984 due to beef and total meat supplies below year-earlier levels. Pork supplies are expected to decrease by 6 to 8 percent in second-half 1984. Retail pork prices were projected at between $1.85 and $1.90 per pound after the spring of 1984. The farm-to-retail price spread for pork is also expected to widen.

World Total Meat[1] Production In Millions of Metric Tons

Year	Argentina	Australia	Bel.-& Lux.	Canada	Czechoslovakia	Denmark	France	W. Germany	Japan	Italy	N. Zealand	Poland	Brazil	South Africa	Un. Kingdom	United States	U.S.S.R.
1974	2.6	1.9		1.6			3.4	3.8	1.2	2.0		2.0	2.9		2.3	17.1	10.5
1975	2.8	2.4	.9	1.6	.8	1.0	3.4	3.8	1.3	1.7	1.0	2.1	3.0	.8	2.3	16.7	11.0
1976	3.2	2.7	.9	1.7	.8	1.0	3.5	3.9	1.4	1.9	1.2	2.4	3.1	.8	2.1	18.1	10.0
1977	3.3	2.0	.7	1.7	.9	1.0	3.4	3.9	1.5	2.0	1.1	2.3	3.4	.8	2.2	18.0	12.7
1978	3.5	2.8	.9	1.7	1.3	1.1	3.5	4.1	1.7	2.0	1.1	2.7	3.1	.8	2.2	17.5	13.3
1979	3.5	2.5	1.0	1.7	1.3	1.2	3.7	4.2	1.8	2.1	1.1	2.7	3.0	.9	2.2	17.1	13.2
1980	3.3	2.3	1.0	1.9	1.3	1.2	3.7	4.3	1.9	2.2	1.1	2.6	3.2	.9	2.3	17.7	12.6
1981	3.1	2.2	1.0	1.9	1.3	1.2	3.7	4.3	1.9	2.2	1.2	2.0	3.2	.8	2.3	17.7	12.7
1982[2]	2.6	2.5	1.0	1.9	1.2	1.2	3.5	4.2	1.9	2.2	1.1	2.3	3.4	.9	2.2	17.0	12.6
1983																	

[1] Production of beef & veal, mutton & lamb, goat meat, & pork. Horsemeat included from 1976. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

T.395

World Per Capita Consumption of Meat[1] (Total Red Meat) In Kilograms

Year	Argentina	Australia	Austria	Canada	Denmark	France	W. Germany	Ireland	N. Zealand	Poland	Switzerland	United Kingdom	United States	Uruguay	U.S.S.R.
1974	87	100	65	73	51	65	67	64	98	74	64	58	87	100	44
1975	99	109	68	73	54	66	67	67	103	73	64	58	83	100	45
1976	101.3	110.2	69.9	79.3	59.8	68.4	69.2	63.6	100.0	66.6	66.2	55.4	88.6	88.8	47.1
1977	101.2	110.1	71.1	76.8	58.7	69.4	69.6	62.4	107.2	65.5	69.5	58.1	87.2	96.8	51.0
1978	105.6	103.4	72.2	73.8	67.2	72.2	72.9	63.0	104.5	58.9	70.0	58.2	84.8	102.9	51.3
1979	103.0	88.3	73.4	71.1	66.9	74.2	74.3	64.9	100.2	57.8	70.2	59.9	81.7	81.5	51.7
1980[2]	103.3	83.8	74.3	73.6	71.0	75.1	75.7	65.9	98.1	56.6	76.8	58.2	83.9	94.0	49.8
1981[3]	103.2	77.7	74.9	72.4	72.1	74.5	75.7	65.9	97.9	48.2	77.9	56.1	80.0	95.1	47.9
1982															

[1] Summation of previous individual meat tables plus horse meat. [2] Preliminary. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

T.396

Total Red Meat Imports (Carcass Weight Equivalent[2]) of Importing Countries In Thous. of Metric Tons

Year	Belgium & Lux.	Canada	Czecho-slovakia	France	South Korea	W. Germany	Greece	Italy	Japan	Netherlands	Spain	Switzerland	Un. Kingdom	United States	USSR
1971	82.5	122.4	65.1	324.0		422.1	123.9	473.2	312.1	75.5	47.8	53.7	1,431	1,065	133.6
1972	94.5	168.3	36.8	427.2		603.8	103.1	512.9	422.1	114.5	167.6	56.7	1,524	1,212	87.9
1973	106.0	163.5	85.3	468.4		605.1	126.7	660.4	592.9	118.5	128.2	56.3	1,312	1,176	94.4
1974	87.3	130.5	41.6	422.3	*1974-*	563.0	34.3	550.6	394.2	105.0	25.8	33.0	1,059	981.3	455.7
1975	111.7	151.6	12.3	479.1	*78*	586.0	50.3	588.7	569.8	131.2	71.7	24.7	1,064	1,020	454.1
1976	120.5	249.4	22.0	482.2	*(24)*	614.0	95.0	593.0	692.7	150.0	101.9	26.1	1,132	1,184	274.6
1977	121.2	194.3	21.4	556.2		627.0	110.9	612.9	649.0	175.3	59.2	26.0	1,280	1,100	496.2
1978	143.9	172.9	21.0	630.4		633.0	142.0	632.1	665.4	187.5	112.3	33.8	1,276	1,296	132.0
1979	99	140	21	541	108	648	140	684	610	149	124	25	1,245	1,348	469
1980	91	111	21	590	15	700	134	722	486	168	27	23	1,122	1,210	706
1981	88	110	21	579	45	687	80	690	612	146	16	31	1,072	1,058	786
1982[1]	99	107	21	626	67	680	81	814	555	112	14	25	1,105	1,175	739
1983[3]														1,211	

[1] Preliminary. [2] Excludes fat, offals & live animals. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.397

Total Red Meat Exports (Carcass Weight Equivalent[2]) of Principal Countries In Thousands of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Denmark	France	Ireland	Mexico	Netherlands	N. Zealand	Poland	United States	USSR	Uruguay	Yugoslavia
1971	556.8	926.6	187.6	102.7	683.7	212.3	256.5	55.9	511.2	731.2	189.3	59.8	60.7	102.1	120.7
1972	771.0	1,137	267.7	102.6	654.8	178.7	226.9	64.1	499.7	736.9	188.7	82.9	82.0	148.4	121.4
1973	600.2	1,132	225.5	112.5	647.0	200.5	227.8	48.2	555.6	723.8	216.2	140.9	98.5	111.8	106.1
1974	357.7	6,106	154.0	81.5	690.4	337.0	300.2	27.3	589.5	620.3	153.6	109.0	79.1	123.4	59.1
1975	329.5	943.0	156.2	78.2	700.2	374.8	359.7	17.6	610.9	708.2	161.7	164.0	63.5	124.1	86.8
1976	628.6	1,129	217.0	112.2	634.1	366.8	282.9	28.5	641.0	788.6	117.7	236.4	67.6	201.8	98.5
1977	669.6	1,335	240.0	112.1	695.6	312.2	363.8	34.1	697.2	790.9	131.8	236.0	49.2	134.6	88.0
1978	823.7	1,377	178.1	117.1	753.4	267.2	359.3	46.6	751.6	724.7	141.0	256.6	38.0	118.8	113.4
1979	728	1,306	111	133	832	306	342	7	785	783	155	211	33	84	82
1980	487	1,087	170	182	857	362	453	1	843	796	141	195	35	128	98
1981	508	966	281	207	905	415	324	1	932	817	60	240	53	185	72
1982[1]	546	1,182	348	277	885	409	332	1	861	802	40	213	30	178	102
1983[3]												225			

[1] Preliminary. [2] Excludes fat, offals & live animals. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.398

United States Exports of Livestock & Meat Products In Thousands of Metric Trons[5]

	Red Meats						Byproducts					Live Animals (1,000 Head)			
Year	Beef & Veal	Pork	Lamb, Mutton & Goat	Sausage, Bol. & Frank.	Other Meats[2]	Total	Variety Meats[3]	Saus. Casings (Animal)	Lard	Tallow & Greases	Cattle Parts[4]	Cattle & Calves	Sheep & Lambs	Hogs	Horses, Mules, Etc.
1971	42.0	65.3	1.3	4.0	12.4	125.0	277.5	12.3	282.3	2,616	28.4	93.0	213.8	17.3	14.5
1972	52.2	99.3	1.3	4.0	12.1	168.8	254.1	13.6	164.4	2,368	27.0	103.9	159.4	12.3	21.2
1973	79.1	160.7	1.7	5.6	15.8	263.0	281.9	14.8	113.3	2,319	31.2	272.6	204.3	16.8	71.5
1974[5]	23.0	42.9	1.2	2.4	9.0	78.4	134.2	5.6	73.2	1,218	37.8	204.4	290.7	15.8	66.4
1975	20.7	91.2	1.3	2.2	5.7	121.0	133.2	5.8	39.8	916.0	13.8	195.9	339.2	16.0	36.4
1976	36.6	137.5	1.4	2.5	7.7	185.6	172.2	6.9	81.9	1,076	10.5	204.5	244.5	10.8	37.8
1977	41.5	125.2	1.8	3.4	8.2	180.0	173.1	6.9	82.6	1,319	10.5	107.0	205.1	10.2	23.0
1978	55.3	100.2	1.4	3.7	6.8	167.3	185.8	7.1	54.2	1,228	19.4	122.2	141.8	12.7	43.9
1979	57.4	97.4	.6	3.0	4.7	163.0	168.9	7.2	43.5	1,286	21.6	66.2	125.4	13.4	29.1
1980	59.5	84.2	.6	3.3	7.4	155.0	200.4	7.6	41.9	1,516	17.5	65.6	123.5	16.3	25.7
1981	74.7	100.9	1.0	3.8	7.9	188.3	210.0	7.2	67.9	1,487	14.9	87.8	220.9	24.1	66.9
1982[1]	85.7	69.5	.7	3.4	5.3	164.6	230.3		46.7			57.5	280.6	36.8	
1983[1]												56			

[1] Preliminary. [2] Canned mainly. [3] Beef, Pork & other byproducts. [4] Excludes furskins. [5] Data prior to 1974 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.* T.399

MEATS

Production and Consumption of Red Meats in the United States (*Carcass Weight*)

	Beef			Veal			Lamb & Mutton			Pork (Excluding Lard)			All Meats		
		Consumption			Consumption			Consumption			Consumption			Consumption	
Year	Production	Total	Per Capita	Production	Total	Per Capita	Production	Total	Per Capita	Production	Total	Per Capita	Production	Total	Per Capita
	Mil. Lbs.		Lb.	Mil. Lbs.		Lb.	Mil. Lbs.		Lb.	Mil. Lbs.		Lb.	Mil. Lbs.		Lb.
1971	21,868	23,086	112.7	546	546	2.7	555	646	3.2	14,783	16,127	78.7	37,752	40,405	197.2
1972	22,381	23,956	115.5	458	464	2.2	543	684	3.3	13,617	14,712	70.9	36,999	39,816	191.9
1973	21,277	22,814	108.8	357	376	1.8	514	556	2.7	12,751	13,298	63.5	34,899	37,044	176.7
1974	23,138	24,488	115.7	486	493	2.3	465	482	2.3	13,805	14,493	68.5	37,894	39,956	188.8
1975	23,976	25,397	118.8	873	876	4.1	410	431	2.0	11,503	11,852	55.4	36,762	38,556	180.3
1976	25,969	27,539	127.5	853	853	4.0	371	396	1.8	12,415	12,667	58.6	39,608	41,456	191.9
1977	25,279	27,048	124.0	834	835	3.8	351	370	1.7	13,247	13,202	60.5	39,711	41,455	190.1
1978	24,242	25,998	117.9	599	645	2.9	301	343	1.6	13,393	13,293	60.3	38,576	40,279	182.7
1979	21,262	23,522	105.5	411	450	2.0	282	332	1.5	15,270	15,353	68.8	37,225	39,657	177.8
1980	21,469	23,320	103.4	379	410	1.8	310	345	1.5	16,432	16,574	73.5	38,590	40,648	180.2
1981	22,214	23,756	104.3	415	438	1.9	327	360	1.6	15,716	15,927	69.9	38,672	40,481	177.8
1982[1]	22,366	23,998	104.4	423	457	2.0	356	381	1.7	14,121	14,425	62.7	37,266	39,261	170.8
1983[2]	23,060	24,500	106	428	450	1.9	367	385	1.9	15,061	14,800	65	38,916	40,000	173
1984															

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.* T.400

U.S. Imports of Meats and Meat Preparations In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	133	112	151	141	133	170	155	166	223	110	102	188	1,789
1972	161	140	138	159	161	152	166	216	206	202	174	138	2,012
1973	165	148	133	149	166	143	153	209	159	207	184	156	1,972
1974	171	137	168	142	126	124	102	141	130	114	134	146	1,634
1975	179	131	146	125	111	135	148	149	157	135	168	112	1,694
1976	175	117	173	158	170	187	159	151	178	170	134	94	1,868
1977	131	150	143	147	147	135	147	158	167	117	87	212	1,741
1978	138	155	183	202	181	167	161	137	182	184	201	181	2,072
1979	201	184	214	201	190	214	168	141	142	143	188	193	2,178
1980	196	152	166	134	173	154	208	170	133	207	167	191	2,052
1981	171	167	131	155	140	153	162	168	180	167	120	118	1,832
1982	127	106	160	169	167	215	158	234	246	194	124	114	2,015
1983	208	177	176	178	187	176	189	181	171	169	123	104	2,039
1984													

Source: Dept. of Commerce T.401

United States Imports of Livestock & Meat Products In Thousands of Metric Tons[2]

	Red Meats							Byproducts				Live Animals (1,000 Head)			
Year	Beef, Boneless	Canned Corned	Pork	Lamb	Mutton & Goat	Total	Meat for Animal Food	Variety Meats	Lard	Tallow & Greases	Meat Extract	Cattle & Calves	Sheep & Lambs	Hogs	Horses, Mules, Etc.
1971	1,057	67.1	356.5	38.2	32.3	1,760		6.5	.5	6.1	1.2	991	5.5	77.5	3.7
1972	1,251	80.1	394.7	37.3	55.6	1,990	55.8	7.9	.3	5.7	.9	1,187	13.8	89.0	3.2
1973	1,292	69.9	398.5	27.3	13.0	1,954	41.9	7.2	—	15.1	1.5	1,039	9.5	87.6	3.3
1974[2]	469.0	30.4	164.2	8.1	1.8	733.6	8.3	2.7	.1	7.2	.3	568	.9	196.3	3.7
1975	533.4	24.0	148.4	11.2	.5	762.8	8.0	2.5	—	8.0	.2	389	3.5	29.8	9.2
1976	560.2	45.3	144.0	15.5	.4	838.4	3.7	2.4	—	4.8	.4	984	4.6	45.6	10.0
1977	541.0	34.1	135.3	9.5	.3	784.0	1.3	2.6	—	3.1	.3	1,133	8.5	43.0	11.3
1978	651.1	37.6	157.3	17.2	.2	931.7	1.8	2.5	.2	2.4	.5	1,253	11.2	202.4	19.0
1979	685.5	34.6	163.8	19.4	.4	978.9	1.9	4.7	—	1.1	.6	732	9.5	136.6	16.2
1980	622.6	34.5	196.6	15.0	—	923.1	3.5	4.6	—	2.2	.1	681	20.5	247.3	15.9
1981[1]	524.1	29.4	195.8	14.1	—	823.0	4.1	3.6	—	2.5	.4	659	6.9	145.7	14.2
1982[3]	662.3		226.0	8.6		896.9						1,005	9.3	294.9	
1983[3]												921			

[1] Preliminary. [2] Data prior to 1974 are in MILLIONS OF POUNDS. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.402

U.S. Exports of Meat and Meat Preparations In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	39	41	49	35	46	43	39	51	48	39	43	69	547
1972	40	37	44	45	64	58	48	49	47	67	57	57	614
1973	48	52	81	75	74	66	49	57	53	72	62	70	759
1974	58	51	60	56	51	54	68	64	58	77	64	54	714
1975	57	67	75	65	79	64	70	77	73	76	79	82	864
1976	85	93	114	99	119	109	90	112	110	130	117	128	1,305
1977	100	100	103	113	110	103	112	110	125	106	109	124	1,315
1978	109	101	115	108	108	99	93	119	131	124	119	111	1,338
1979	102	95	117	99	100	124	103	109	119	135	119	155	1,378
1980	101	108	144	132	139	164	145	129	136	165	144	154	1,663
1981	143	141	169	248	189	180	128	144	123	174	154	153	1,847
1982	129	147	124	131	167	147	111	108	112	133	143	115	1,566
1983	114	104	136	133	115	118	121	99	130	127	134	119	1,450
1984													

Source: Dept. of Commerce

T.403

Average Wholesale Prices of Meats In Cents Per Pound

Year	Composite Retail Price of Beef (Choice)	Composite Retail Price of Pork[4]	Composite Retail Price of Veal	Composite Retail Price of Lamb (Choice)	Steer Beef Carcass, Choice, Centr. U.S.	Fresh Beef, Steer Carcasses Choice, E. Coast	Lamb Carcasses Choice & Prime (35-45 Lb.) East Coast[5]	Pork Loins, (8-14 lbs.) N.Y.	Hams[2] Fancy Skinned, Smoked	Picnics (Smoked) 4-8 Lb.[1]	Live Broilers Georgia
1971	108.1	69.8	135.8	109.7	52.67	54.7	60.71	49.85	53.4	32.31	12.8
1972	118.7	82.7	153.9	118.8	55.63	57.6	65.21	64.46	62.6	40.47	13.1
1973	142.1	109.2	181.7	134.3	67.62	69.6	74.30	81.91	81.0	55.51	23.9
1974	146.3	107.8	194.1	146.4	73.12	69.1	83.33	78.56	67.8	47.95	21.1
1975	154.8	134.6	181.1	167.6	73.18	75.4	95.07	99.28	88.2	60.31	26.9
1976	148.2	134.0	173.3	185.6	61.00	64.4	102.67	97.68	85.5	61.35	24.0
1977	148.4	125.4	175.3	186.8	62.69	66.2	108.73	95.25	86.5	57.03	23.7
1978	181.9	143.6	209.5	219.6	80.43	83.9	127.20	109.15	90.0		26.0
1979	226.3	144.1	282.3	245.7	101.62	101.1	134.50	107.65	80.6		26.0
1980	237.6	139.5	309.5	252.7	104.44	104.4	135.02	101.14	81.3		27.0
1981	238.7	152.4	314.5	252.4	99.84	99.8	126.49	113.70	77.6		26.5
1982[3]	242.5	175.4	N.A.	N.A.	101.31	101.3		127.66	N.A.		25.0
1983[3]					97.83			105.30			28.2

[1] At NY. [2] Composite. [3] Preliminary. [4] Sold as retail cuts (ham, bacon, loin, etc.). [5] Prior to 1972—CHICAGO. *Sources: Bureau of Labor Statistics; Department of Agriculture*

T.404

Average Wholesale Price of Steer Beef Carcass, Choice[1], at Midwest Markets[2] In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	48.60	51.86	51.45	52.62	53.96	52.62	52.54	53.99	52.75	51.60	54.08	55.92	52.67
1972	57.52	57.58	54.92	53.72	56.45	59.36	58.69	54.56	53.36	52.95	51.26	57.20	55.63
1973	62.85	66.85	69.38	69.84	69.15	70.92	71.90	—	69.69	65.56	61.97	65.00	67.62
1974	75.56	75.78	67.62	65.84	66.13	62.18	84.92	77.95	79.66	75.62	72.96	73.25	73.12
1975	61.36	58.41	59.50	70.20	80.60	85.76	82.82	77.95	79.66	75.62	72.98	73.25	73.18
1976	66.68	62.22	56.97	65.85	63.56	62.45	58.20	57.05	57.24	58.36	60.85	62.52	61.00
1977	60.04	58.92	57.12	60.54	64.44	62.62	63.65	62.49	63.04	65.87	65.47	68.10	62.69
1978	68.74	71.08	74.88	81.43	88.48	85.95	84.81	79.94	81.96	82.14	80.98	84.75	80.43
1979	93.57	97.47	104.59	108.61	108.64	103.56	99.85	94.13	101.91	98.32	103.22	105.53	101.62
1980	102.26	103.70	103.15	99.41	102.00	105.18	110.11	111.96	107.97	105.49	101.44	100.57	104.40
1981	99.80	96.80	94.32	99.68	103.32	106.52	107.3	103.90	102.96	96.02	94.56	93.70	99.80
1982	97.40	101.20	103.80	109.50	115.10	111.20	102.60	100.80	95.50	96.30	92.90	92.62	101.30
1983	94.14	96.55	100.62	107.76	105.00	102.47	97.72	95.01	92.10	91.24	91.57	99.82	97.83
1984	105.70												
1985													

[1] 500–600 pounds. [2] Prior to Oct. 1975 prices are at CHICAGO. *Source: Economic Research Service, U.S.D.A.*

T.405

MEATS

Production[2] (Commercial Slaughter[4]) of All Meats[1] in the U.S. In Millions of Pounds—Carcass Weight

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	3,076	2,663	3,233	3,074	2,940	3,104	2,879	2,966	3,116	3,027	3,072	3,062	36,209
1972	2,861	2,744	3,193	2,859	3,097	2,996	2,581	3,082	2,968	3,228	3,130	2,893	35,632
1973[4]	3,176	2,722	2,979	2,579	3,051	2,799	2,651	2,704	2,635	3,225	3,079	2,894	34,495
1974	3,255	2,661	3,098	3,149	3,266	2,945	3,026	3,132	3,074	3,471	3,155	3,088	37,323
1975	3,315	2,880	2,959	3,089	2,873	2,832	2,842	2,860	3,088	3,339	2,978	3,159	36,213
1976	3,267	2,907	3,515	3,109	2,928	3,150	3,048	3,350	3,467	3,497	3,453	3,367	39,060
1977	3,237	3,084	3,551	3,195	3,122	3,298	2,925	3,404	3,354	3,345	3,416	3,241	39,172
1978	3,215	3,045	3,342	3,079	3,269	3,081	2,883	3,274	3,139	3,355	3,345	3,094	38,119
1979	3,280	2,756	3,090	2,879	3,130	2,990	2,958	3,329	2,876	3,556	3,306	3,074	37,225
1980	3,398	3,050	3,099	3,315	3,311	3,089	3,070	3,016	3,221	3,577	3,097	3,349	38,590
1981	3,417	3,014	3,389	3,299	3,071	3,118	3,041	3,044	3,247	3,433	3,185	3,417	38,675
1982	3,152	2,894	3,296	9,097			9,165			9,659			37,266
1983[3]	3,151	2,786	3,286	3,038	3,146	3,276	2,985	3,439	3,436	3,527	3,474	3,388	38,932
1984													

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[1] Except for pork production & lard. [2] Represents the total dressed carcass weight of livestock slaughtered under Federal inspection, exclusive of meats from condemned animals. [3] Preliminary. [4] Prior to 1973 data are for INSPECTED SLAUGHTER. *Source: Agricultural Marketing Service, U.S.D.A.*

T.406

Cold Storage Holdings of All[1] Meats in the United States, at End of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	769.8	745.2	789.1	866.1	897.4	890.8	831.7	771.6	775.3	768.1	756.0	795.8
1972	745.6	707.1	732.4	819.0	797.5	710.1	638.1	598.8	594.0	641.7	702.0	670.3
1973	681.9	661.5	687.0	706.7	697.6	675.3	588.5	505.4	525.0	643.3	770.0	829.7
1974	868.9	875.4	946.4	995.9	1,011.3	913.8	796.1	725.1	692.0	715.4	754.2	803.2
1975	809.4	793.9	787.4	801.1	725.6	654.0	578.2	518.4	517.5	571.3	667.6	675.2
1976	643.4	652.8	703.1	724.3	740.9	698.1	645.4	597.6	637.7	687.8	725.9	733.3
1977	745.4	759.6	776.4	823.0	802.4	723.4	629.4	568.6	579.0	532.1	565.2	566.6
1978	559.1	571.6	658.4	753.0	759.8	720.6	644.9	581.0	598.1	639.0	715.4	723.6
1979	728.4	710.9	762.5	783.4	797.0	755.0	685.6	580.7	549.1	604.5	656.9	706.2
1980	735.3	712.6	695.4	715.5	706.5	641.9	578.5	514.3	510.0	584.2	678.6	749.6
1981	790.3	782.9	775.9	817.2	795.2	716.6	628.6	538.9	508.6	546.8	552.2	578.2
1982	553.4	524.2	536.0	—	—	503.9	—	—	473.9	—	—	553.8
1983[2]	573.4	576.3	586.3	602.5	614.3	591.5	569.8	543.6	535.7	576.7	667.6	679.3
1984[2]	692.9	707.7	736.5									
1985												

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[1] Includes beef and veal, mutton and lamb, pork and products, rendered pork fat, and miscellaneous meats. Excludes lard. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.407

Cold Storage Holdings of Frozen Beef[1] in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1971	338.4	325.7	308.4	302.1	290.3	285.1	296.7	312.2	333.2	351.1	347.2	326.9
1972	366.0	338.5	308.6	286.0	283.0	276.6	255.7	260.2	283.6	297.7	326.7	351.4
1973	367.1	382.8	368.9	359.3	360.1	335.6	322.4	298.1	253.6	244.5	315.3	392.6
1974	447.8	470.5	456.1	477.1	467.4	461.3	438.0	397.5	375.2	346.8	350.4	359.8
1975	401.9	407.1	385.9	384.6	349.0	308.6	288.1	269.0	258.2	254.4	272.4	320.0
1976	349.8	342.8	355.7	390.6	390.8	399.7	395.3	382.6	362.8	382.4	405.0	429.6
1977	453.5	474.6	475.4	472.9	472.0	447.4	412.6	374.0	350.1	345.8	301.1	291.5
1978	315.6	313.1	318.4	357.2	376.0	388.2	372.3	336.5	315.7	332.2	348.4	388.2
1979	405.4	423.7	405.0	427.4	410.1	411.9	395.7	369.6	324.2	296.7	308.2	321.9
1980	350.3	367.3	357.6	335.1	296.6	277.9	256.5	242.5	228.6	219.7	243.8	279.0
1981	328.2	361.3	347.8	341.5	339.4	328.6	297.5	272.6	245.2	234.9	244.6	232.2
1982	256.7	249.1	223.3	211.9	—	—	189.7	—	—	247.7	—	—
1983[2]	294.4	303.1	307.0	299.1	277.3	265.2	254.0	252.3	267.7	268.6	278.0	316.0
1984[2]	325.0	338.0	332.5	326.9								
1985												

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[1] Includes frozen beef, cured beef, and beef in process of cure. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.408

Mercury

World mine production of mercury amounted to an estimated 192,000 flasks in 1983, according to a U.S. Bureau of Mines estimate. U.S. mine production of mercury amounted to 25,027 flasks (76 lbs. each) in 1983, compared with 25,760 flasks in 1982, but secondary production rose to 13,672 flasks from 4,473 in 1982. About 6 companies recovered secondary mercury from used instruments, batteries, dental amalgams, or industrial scrap and/or residues. Virtually all of domestic mine production was accounted for by one mine in Nevada.

U.S. consumption of mercury in 1983 totaled 49,137 flasks versus 48,943 flasks in 1982. Environmental pollution control factors continued to check growth in consumption, particularly in paints, agriculture, pharmaceuticals, and the chlor-alkali industry. No new mercury-cell chlor-alkali plants were planned and two plants closed indefinitely in 1983 because of economic problems. Electrical apparatus (mostly batteries) accounted for an estimated 57 percent of use; electrolytic production of chlorine and caustic soda—15 percent; mildew-proofing paint—13 percent; industrial and control instruments—5 percent; others—10 percent.

U.S. imports of mercury for consumption rose sharply in 1983, to 12,785 flasks from 8,916 in 1982. Spain, the United Kingdom, Algeria, Mexico, the Netherlands, and Turkey were the main suppliers. Imports from Japan, the major supplier of mercury to the U.S. in 1982, dropped significantly in 1983.

The average New York dealer price per flask dropped from $354.91 in the first quarter of 1983 to $287.65 in the third quarter, but recovered to $336.20 in the fourth quarter. The average price for 1983 was $322.44 versus $370.93 in 1982.

Mercury can be replaced by nickel-cadmium or other battery systems in electrical apparatus, and by solid state devices in industrial and control instruments.

The General Services Administration (GSA) sold 1,500 flasks of primary mercury in the first quarter of 1983 and 4,500 flasks in the third quarter. The GSA made no sales in the second or fourth quarters, but announced that on March 7, 1984 it would resume monthly solicitation of bids for approximately 538,000 pounds of mercuric oxide held in the National Defense Stockpile.

Stocks of mercury held by consumers, dealers, and mine producers at the end of 1983 were 6 percent larger than a year earlier.

World Production of Mercury In Flasks of 34.5 Kilograms (76 Pounds)

Year	Yugoslavia	Peru	Philippines	Finland	China[1]	Canada	Czechoslovakia	Turkey	Italy	W. Germany	Mexico	Spain	Algeria	United States	USSR[1]	World Total
1970	15,461	3,196	4,648	388	20,000	24,400		8,592	44,470	5,170	30,256	45,552		27,296	48,000	284,014
1971	16,593	3,462	50,020	520	26,000	18,500		10,460	42,613	5,564	35,390	50,831		17,883	50,000	300,634
1972	16,419	4,550	3,341	640	26,000	14,637		7,963	41,801	5,019	22,510	53,994		7,349	50,000	278,968
1973	15,606	3,581	2,169	798	26,000	12,500		7,861	33,504	3,742	21,646	62,069		2,227	52,999	270,014
1974	15,838	3,252	812	921	26,000	14,000	5,541	8,833	25,991	1,409	25,933	54,354	14,000	2,189	54,000	257,477
1975	16,941	1,530	244	97	26,000	12,000	5,900	5,421	31,677	—	14,214	44,010	28,000	7,366	55,000	252,329
1976	12,503	—	—	13	18,000	—	5,540	4,899	22,278	—	15,026	42,729	30,915	23,133	56,000	234,614
1977	3,133	—	—	630	20,000	—	5,309	4,686	406	2,872	9,660	26,851	30,429	28,244	58,000	190,736
1978	—	—	—	1,145	20,000	—	5,686	5,020	87	2,437	2,205	29,588	30,592	24,163	60,000	181,372
1979	—	—	—	1,348	20,000	—	4,960	4,722	—	2,639	1,973	33,275	14,719	29,519	61,000	174,436
1980	—	—	—	2,170	20,000	—	6,236	4,461	96	1,624	4,206	49,198	24,403	30,657	62,000	205,210
1981[2]	—	—	—	1,949	20,000	—	8,383	5,927	7,310	2,205	6,962	45,253	25,000	27,904	63,000	213,970
1982[2]	—	—	—	2,000	20,000		8,500	6,000	4,000	2,200	6,500	45,000	11,000	25,760	64,000	192,160
1983[1]												45,000	11,000	25,000	64,000	192,000
1984																

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

T.409

How to keep your Commodity Year Book statistics up-to-date continuously throughout the year.

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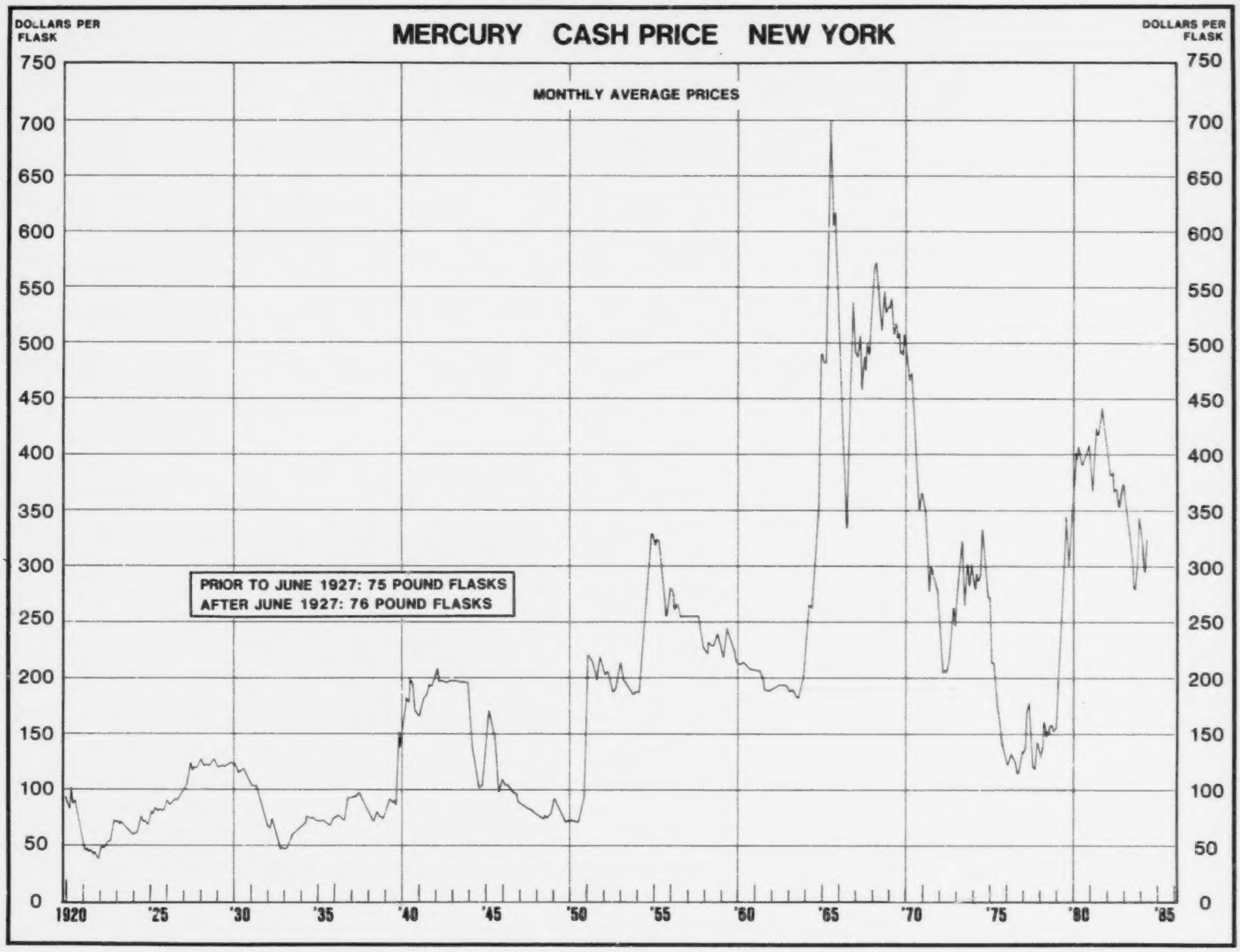


Average Price of Mercury in New York In Dollars Per Flask of 76 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	357.25	353.21	340.43	323.09	301.00	275.68	299.76	295.00	288.09	280.79	269.00	252.10	302.95
1972	222.14	216.00	205.35	203.05	170.95	205.86	213.00	239.04	262.50	256.30	259.00	267.80	226.76
1973	284.59	303.10	320.13	305.81	273.49	262.50	273.95	301.83	280.79	293.45	301.83	293.83	291.27
1974	282.84	279.05	292.07	285.82	288.32	333.35	328.56	296.09	290.00	281.52	270.50	270.50	291.55
1975	223.05	212.50	212.50	202.84	170.00	170.00	149.09	141.00	137.50	131.91	130.00	121.50	166.82
1976	120.55	126.63	127.87	131.64	125.70	113.50	113.50	113.77	120.60	132.17	133.08	132.00	124.25
1977	137.02	168.03	173.50	150.38	135.79	120.68	122.26	123.54	137.57	142.76	135.80	129.12	139.70
1978	143.29	160.58	147.57	147.08	151.98	149.55	157.11	157.00	151.67	152.34	154.55	170.55	153.60
1979	190.80	202.63	224.32	255.00	300.55	343.90	322.34	300.33	313.16	324.13	328.63	362.08	288.99
1980	383.75	399.90	420.00	406.81	398.33	389.57	397.11	397.26	402.62	407.83	404.56	376.19	396.72
1981	366.00	386.79	411.18	423.41	418.50	423.07	433.75	441.14	436.55	425.91	421.84	413.07	416.77
1982	405.00	380.92	390.76	384.32	365.88	367.50	364.29	343.50	352.55	373.21	373.75	374.29	372.98
1983	366.67	346.18	338.91	327.62	316.31	300.23	282.25	279.02	299.05	339.29	344.50	331.69	322.64
1984	317.90	295.68	300.45	324.26									

Source: American Metal Market T.410

Salient Statistics of Mercury in the United States In Flasks (76 Pounds Each)

Year	Net Import Reliance as a % of Apparent Consumption	Ore Treated (1,000 Short Tons)	Mercury Produced[2]		Production		Stocks, Dec. 31			Exports	U.S. Imports (For Consumption) From:					
			Flasks	Pounds per Ton of Ore	Mine	Secondary	Producers	Consumers & Dealers	Total		Total	Canada	Italy	Mexico	Spain	Japan
1971		265.8	17,444	5.0	17,883	16,666	5,373	11,489	16,862	7,232	28,449	18,198	250	4,786	2,152	
1972		82.6	7,004	6.5	7,349	12,651	4,171	11,537	15,708	400	28,834	13,803	—	5,529	1,829	
1973		26.3	2,101	6.1	2,227	10,329	3,927	14,019	17,946	342	46,026	17,440	1,005	2,775	7,286	
1974		28.9	1,680	4.4	2,189	8,293	4,100	15,777	19,877	466	52,180	16,972	845	10,597	6,293	
1975	69	76.8	6,905	6.8	7,366	8,038	4,858	20,691	25,549	339	43,865	12,891	7,340	2,213	4,575	
1976	62	185.1	23,042	9.5	23,133	3,363	9,494	22,240	31,734	501	44,415	2,853	13,172	1,719	4,824	
1977	44	216.6	28,244	9.9	28.244	6,566	11,275	22,903	34,178	852	28,750	1,708	671	4,668	8,790	
1978	60	256.2	24,144	7.2	24,163	9,262	16,600	22,149	38,749	N.A.	41,693	895	5,913	813	13,923	4,428
1979	59	242.6	29,499	9.2	29,519	15,587	9,181	18,401	27,582	N.A.	26,448	3,943	4,429	403	8,507	7,960
1980	27	356.0	30,623	6.5	30,657	16,806	11,095	21,974	33,069	N.A.	9,416	843	—	989	3,352	3,813
1981	44	262.4	27,888	8.1	27,909	11,244	11,783	15,556	27,339	—	12,408	112	—	104	4,989	2,372
1982[1]	31	301.0	25,704	6.5	25,760	4,473	14,098	15,229	29,327	.0	8,916	5	—	182	1,404	4,345
1983[3]	25				25,027	14,000	18,710	12,429	31,139		12,785	4	500	1,590	3,407	511
1984																

[1] Preliminary. [2] Excludes mercury produced from placer operation & from clean-up activity at furnaces & other plants. [3] Estimate. *Source: Bureau of Mines* T.412

Mercury Consumed in the United States In Flasks

Year	Batteries	Chlorine & Rust. Prep.	Catalysts	Dental Prep.	Electrical Lighting[3]	Electrolytic Prep.	General Lab. Use	Industrial & Control Instrum.	Paint		Wiring Devices & Switches	Meas. & Control Devices	Other	Grand Total
									Anti-Fouling	Mildew Proofing				
1971			1,012	2,361	16,885	12,154	1,798	4,871	414	8,191			2,407	52,257
1972			800	2,983	15,553	11,519	594	6,541	32	8,190			4,258	52,907
1973			673	2.679	18,000	13,070	658	7,155	32	7,571			1,913	54,283
1974			1,298	3,024	19,678	16,897	476	6,202	6	6,807			2,452	59,479
1975			838	2,340	16,971	15,222	335	4,598	—	6,928			1,750	50,838
1976			1,264	1,990	27,498	16,054	595	5,067	—	7,845			2,909	64,870
1977			1,545	1,230	29,180	10,744	406	5,221	—	8,365			2,589	61,259
1978	13,825	11,166	N.A.	512	10,897	11,166	420	4,078		8,956	3,178	3,489	11,763	59,393
1979	7,988	12,180	548	793	7,719	12,180	410	3,602		9,979	3,213	3,603		62,205
1980	27,829	9,470	265	1,041	1,036	9,470	363	3,049		8,621	3,062	3,049		58,983
1981	29,441	7,323	815	1,866	1,043	7,323	328	5,671		7,049	2,641	5,671		59,244
1982[1]	24,880	6,224	499	1,019	826	6,224	272			6,794	2,004	3,064		48,943
1983[2]	17,337	8,047		1,225	993		128			6,047	2,233	2,065		49,137
1984														

[1] Preliminary. [2] Estimate. [3] Data prior to 1980 are for Electrical Apparatus. *Source: Bureau of Mines* T.413

Average Price of Mercury at London In U.S. Dollars Per Flask

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	359.8	359.6	335.8	316.6	285.9	251.1	278.7	255.4	256.0	244.2	233.9	210.2	282.46
1972	208.1	198.8	173.4	141.4	153.3	177.4	191.1	222.5	241.1	237.8	242.8	248.5	203.01
1973	260.7	289.4	303.9	283.0	257.8	243.7	263.4	274.8	266.2	270.7	286.6	282.3	273.54
1974	266.7	269.5	270.3	268.0	274.4	315.6	304.5	274.7	272.2	259.6	245.5	194.4	267.94
1975	183.75	194.69	170.00	141.75	137.06	127.50	114.69	114.67	111.69	103.07	84.08	78.28	130.10
1976	81.38	94.51	99.06	99.63	82.00	82.50	83.25	83.25	87.75	100.23	101.67	108.38	91.07
1977	145.79	165.64	184.44	159.32	138.28	122.79	118.58	122.82	130.63	136.34	126.43	137.32	140.70
1978	131.21	130.50	130.10	132.50	131.25	124.83	127.71	128.00	127.29	126.17	137.38	151.86	131.57
1979	196.00	218.49	241.50	262.29	301.86	343.89	301.00	301.63	310.76	324.46	333.34	365.63	291.73
1980	390.06	393.33	396.56	404.39	394.17	386.88	399.33	408.11	415.00	414.72	399.31	374.94	398.07
1981	368.06	389.00	413.61	421.88	426.67	430.00	429.33	430.56	430.06	427.78	422.38	420.95	417.52
1982	410.06	394.69	391.94	382.56	375.63	373.56	369.56	364.89	366.81	369.83	365.06	358.89	376.96
1983													320.00

Source: U.S. Bureau of Mines T.411

Milk

Despite the prospect for improving world economic conditions in 1984, the overall outlook called for supplies of dairy products to outrun demand. Thus, worldwide dairy prices are expected to remain generally weak throughout most of 1984.

Milk production in the thirty-seven major milk producing countries during 1983 totaled 407 million metric tons, almost 4 percent above 1982 production. Most of this increase was accounted for by increased production in the Soviet Union, the European Community (EC), and the U.S. Production increases were most significant in the Soviet Union. While cow numbers in that country rose by only 1 percent, forage conditions improved significantly and milk production rose 6 percent. Cow numbers in other milk producing countries were relatively stable during 1983. The major increase in cow numbers occurred in the EC because farmers there expanded their dairy herds in response to relatively favorable EC milk prices.

Forecasts call for 1984 world milk production to increase again by nearly 1 percent over 1983, to 412.0 million tons. Production by the Soviet Union could account for as much as 25 percent of this total.

Milk production in the U.S. during 1984 is expected to decline nearly 4 percent from a record 139 billion pounds in 1983, primarily because of the number of U.S. milk producers who signed up to reduce their milk output under the dairy diversion program. Uncertainty about the progress of new dairy legislation during 1983 caused many U.S. milk producers to postpone important production decisions, including the reduction of herds.

Following late spring 1983, the full Senate and the House passed into law a compromise dairy bill known as the Dairy and Tobacco Adjustment Act of 1983. The law was signed November 29, 1983. It mandated a lowering of the milk support price from $13.10 to $12.60 per cwt on December 1, 1983—a support price that would remain in effect until March 31, 1985. The new law also mandated a 50-cent-per-cwt deduction on all milk marketed beginning December 1983. The deductions were intended to encourage the adjustment of milk production to national demand. Also a paid diversion program was begun at the first of 1984. The payment rate was set at $10 per cwt., for reductions in producer marketings below a specified base. A milk producer in the paid diversion program will specify a 5 to 30 percent reduction either below the average of calendar 1981 and 1982 marketings or below calendar 1982 marketings. The new paid diversion program is expected to eventually bring about a 3 to 4 percent reduction in U.S. dairy cows during 1984 because of increased producer culling. Beef cattlemen and other meat producers had expressed concern that the increased culling could possibly weaken the price for their livestock. However, the Secretary of Agriculture was empowered to adjust paid diversion contracts as needed in order to minimize the impact of dairy cow culling on the beef, pork, and poultry markets.

December 1983 prices for manufacturing grade milk averaged $12.70 per cwt., 30 cents below both a month and a year earlier. U.S. milk production during 1983 was 138.9 billion pounds, 2.3 percent, or 3.1 billion pounds over the 1982 record. Each month and each quarter of 1983 registered production gains. Milk output per cow increased by 1.7 percent over the 1982 record output of 12,316 pounds.

The average number of milk cows on farms during 1983 totaled 11.1 million, up 0.5 percent from 1982, marking the first consecutive 4-year expansion in the U.S. dairy herd since 1941–44.

Dairy farmers were expected to cull herds more intensively in 1984 because of lower returns for milk, higher feed costs, and better off-farm employment opportunities. The milk/feed price ratio trended lower each month in 1983 until the fall, when it remained nearly constant. The ratio averaged 1.45 in 1983 compared with 1.53 in 1982 and is expected to drop further through most of 1984 because of seasonally lower milk prices. However, the downtrend in feed prices since late 1983 may mean that the milk/feed ratio will begin to improve in the latter part of 1984.

Total commercial dairy stocks on January 1984 were 5.1 billion pounds (milk equivalent, fat-solids basis), up about 500 million pounds from the comparable 1982 level. During January through November 1983, fluid milk sales in Federal order markets were nearly unchanged from the comparable period in 1982. During January through November 1983, sales of lowfat and skim milk items rose by 3 percent, and sales of whole milk items declined 2.3 percent from year-earlier sales. Whole milk sales accounted for just over half of total fluid milk sales in Federal order markets during most of 1983. Commercial disappearance of milk is expected to rise in 1984. The gain may come about because of a strong economic recovery, resulting in increases in real disposable income. At the same time, retail prices for milk should register little or no increase, thus allowing the real prices of dairy products to fall. Even when population growth is taken into account, the per capita use of milk should rise during 1984. The government donation of milk and milk products will continue in 1984. However, these donations to the needy will be required to meet income-based standards. Therefore, the effect of the giveaway programs on commercial sales of milk products can be expected to be considerably reduced.

Imports of dairy products during the first three quarters of 1983, on a milk-equivalent, fat-solids basis, rose by about 10 percent compared to the same period in 1982. Exports of U.S. dairy products during that same period were the equivalent of 2.1 billion.

Milk prices received by farmers at the end of 1983 were slightly below the year-earlier prices because of continued surplus production and the lower support price for milk. As a reflection of lower wholesale spot prices, the Bureau of Labor Statistics (BLS) wholesale price index of dairy products equaled 249.2 (basis 1967=100) in December 1983, just below the year-earlier level for the first time since December 1976. Retail prices for dairy products in 1983 were up slightly, on the other hand. The BLS retail price index for all dairy products stood at 250.2 (1967=100) in November 1983 compared with 249.1 a year earlier. The BLS retail index for dairy products is expected to range from unchanged to 2 percent higher on an annual basis in 1984. This contrasts sharply with an expected 4 to 7 percent increase in the retail prices of all food during 1984.

World Fluid Milk Production (Cow's Milk) In Millions of Metric Tons[3]

Year	Australia	Brazil	Canada	Czechoslovakia	Denmark	Finland	W. Germany	USSR	India	Netherlands	New Zealand	France	Poland	Switzerland	United Kingdom	United States
1971	16.1	16.3	17.8	10.9	10.0	7.2	46.7	183.4		18.5	13.1	60.9	*(14.8)*	7.0	28.0	118.5
1972[3]	7.3	7.5	8.0	5.0	4.8	3.3	21.5	83.2		9.0	6.2	29.9	15.9	3.2	13.4	54.3
1973	7.3	7.2	7.7	5.3	4.7	3.2	21.3	88.3		9.4	6.0	30.4	16.6	3.3	14.3	52.4
1974	7.0	8.5	7.6	5.3	4.9	3.1	21.5	91.8		9.9	5.7	30.6	17.0	3.4	13.7	52.4
1975	6.7	8.8	7.7	5.3	4.9	3.2	21.6	90.8		10.2	5.9	30.9	16.7	3.4	13.5	52.3
1976	6.4	9.3	7.7	5.4	5.0	3.3	22.2	89.7	9.7	10.5	6.4	29.5	16.5	3.5	14.4	54.6
1977	5.9	9.5	7.7	5.5	5.1	3.2	22.5	94.9	9.8	10.6	6.6	30.2	16.9	3.5	15.2	55.7
1978	5.6	10.5	7.5	5.6	5.3	3.2	23.3	94.7	10.1	11.4	6.1	25.9	17.1	3.5	15.9	55.1
1979	5.8	10.1	7.6	5.7	5.2	3.2	23.9	93.3	12.5	11.6	6.5	26.5	16.9	3.6	15.9	56.0
1980	5.6	10.3	7.9	5.9	5.1	3.3	24.8	90.6	15.5	12.0	6.8	26.9	16.7	3.7	16.0	58.3
1981	5.3	10.5	8.0	6.0	5.0	3.2	24.9	88.5	16.5	12.1	6.7	26.9	15.5	3.7	15.9	60.3
1982[1]	5.4	10.8	8.3	6.0	5.2	3.2	25.5	91.0	17.0	12.8	6.8	27.7	16.0	3.7	16.7	61.6
1983[2]	5.7							96.4			6.9	EC-10	(112.3)			63.5
1984[2]	6.0							100.0			7.0	EC-10	(114.1)			

[1] Preliminary. [2] Estimate. [3] Data prior to 1972 are in BILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.* T.414

Milk Cows & Cattle and Milk Production in the U.S.

Year	Number of Milk Cows on Farms[2] (Thousands)	Production Per Milk Cow[3] — Milk — Pounds	Production Per Milk Cow[3] — Milk Fat — Pounds	Total Milk Production[3] — Quantity Billion Pounds	Total Milk Production[3] — % of Fat in All Milk Produced	Total Milk Production[3] — Milk Fat Mil. Lbs.	Milk Sold to Plants & Dealers — Quantity Billion Pounds	Milk Sold to Plants & Dealers — $ Per 100 Lbs.	Milk Sold Directly to Consumers — Quantity Million Quarts	Milk Sold Directly to Consumers — ¢ Per Quart	Milk Utilized Bill. Lbs.	Farm Value of All Milk Mill. $
1970	12,000	9,751	357	117.0	3.66	4,284	110.1	5.71	798.6	27.0	113.0	6,757
1971	11,839	10,015	367	118.6	3.66	4,344	112.2	5.87	731.2	27.9	114.8	7,035
1972	11,700	10,259	377	120.0	3.68	4,410	114.2	6.07	714.8	27.8	116.5	7,361
1973	11,413	10,119	370	115.5	3.66	4,225	109.9	7.14	706.9	31.0	112.1	8,331
1974	11,230	10,293	377	115.6	3.67	4,238	110.4	8.33	718.0	34.9	112.4	9,723
1975	11,139	10,360	381	115.4	3.68	4,240	110.5	8.75	726.8	35.4	112.3	10,199
1976	11,032	10,894	399	120.2	3.66	4,402	115.5	9.66	703.1	36.4	117.2	11,706
1977	10,945	11,206	410	122.7	3.65	4,481	118.2	9.72	695.2	36.7	119.8	12,023
1978	10,803	11,243	412	121.5	3.67	4,455	117.2	10.58	693.2	38.8	118.8	12,957
1979	10,743	11,488	421	123.4	3.66	4,518	119.4	12.00	698.8	42.3	120.9	14,949
1980	10,810	11,889	434	128.5	3.65	4,696	124.7	13.00	683.5	45.3	126.2	16,890
1981	10,923	12,177	443	133.0	3.64	4,843	129.2	13.80	684.7	48.3	130.7	18,447
1982[1]	11,033	12,309	450	135.8	3.65	4,961	135.1	13.60	604.3	48.1	133.4	18,598
1983[1]	11,120	12,587		140.0								

[1] Preliminary. [2] Average number on farms during year excluding heifers not yet fresh. [3] Excludes milk sucked by calves & milk produced by cows not on farms. *Source: Crop Reporting Board, U.S.D.A.* T.415

Utilization of Milk in the United States In Millions of Pounds (Milk Equivalent)

Year	Butter from Whey Cream	Creamery Butter[1]	Cheese[6]	Cottage Cheese (Creamed)	Condensed Whole Milk	Evaporated Milk[5]	Dry Whole Milk Products	Frozen Dairy Products[2]	Fluid Consumption — Nonfarm	Fluid Consumption — Farm[5]	Fed to Calves	Other Mfg. Products[4]
1970	1,659	23,934	19,566	1,250	572	2,687	508	11,041	51,998	2,306	1,702	480
1971	1,820	23,904	20,947	1,296	537	2,702	535	10,973	51,853	2,117	1,635	705
1972	1,981	22,744	22,763	1,321	594	2,540	552	10,951	53,227	1,914	1,624	762
1973	2,054	18,609	23,605	1,138	560	2,375	577	11,070	52,413	1,766	1,584	744
1974	2,237	19,334	25,669	1,018	592	2,223	499	11,188	50,514	1,643	1,558	804
1975	2,119	19,873	23,883	1,028	686	2,020	464	11,898	51,123	1,505	1,566	672
1976	2,543	19,404	28,763	1,050	643	1,892	554	11,623	51,502	1,404	1,567	744
1977	2,543	21,853	28,865	1,056	580	1,809	514	11,707	51,380	1,295	1,541	684
1978	2,660	19,712	29,917	1,056	534	1,725	549	11,744	51,175	1,168	1,497	707
1979	2,810	19,381	31,557	1,028	568	1,752	627	11,679	51,386	1,031	1,437	912
1980	2,998	22,826	33,925	1,016	524	1,594	607	11,926	50,855	943	1,395	909
1981	3,192	24,614	36,546	977	639	1,669	686	11,964	50,215	886	1,418	821
1982[3]	3,365	24,987	38,903	950	704	1,490	758	12,135	49,360	884	1,506	656
1983[7]		25,500	39,500					12,400				

[1] Excludes whey butter. [2] From milk and cream only. [3] Preliminary [4] Includes dry cream, malted milk, dry part skim milk, dry ice cream mix. [5] Data includes evaporated & sweetened condensed milk. [6] American & other. [7] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

T.416

Milk Production on Farms in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	9,728	9,391	10,452	10,566	11,268	10,946	10,442	9,978	9,431	9,437	8,911	9,362	119,904
1973	9,532	8,932	10,176	10,298	10,952	10,532	10,014	9,489	8,877	8,948	8,590	9,052	115,491
1974	9,335	8,763	9,989	10,124	10,869	10,615	10,171	9,711	9,137	9,100	8,663	9,109	115,586
1975	9,344	8,766	9,986	10,092	10,778	10,447	9,972	9,538	9,063	9,180	8,830	9,341	115,334
1976	9,600	9,290	10,281	10,464	11,110	10,806	10,444	10,129	9,607	9,626	9,231	9,681	120,269
1977	9,887	9,301	10,572	10,725	11,354	10,989	10,671	10,363	9,820	9,838	9,391	9,787	122,698
1978	9,958	9,242	10,491	10,610	11,151	10,817	10,503	10,182	9,683	9,780	9,320	9,724	121,461
1979	9,960	9,281	10,534	10,603	11,243	10,948	10,683	10,409	9,987	10,063	9,623	10,077	123,411
1980	10,320	9,972	10,945	11,024	11,697	11,335	11,075	10,792	10,353	10,461	10,055	10,494	128,525
1981	10,805	10,161	11,549	11,555	12,099	11,606	11,387	11,132	10,659	10,768	10,387	10,905	133,013
1982	11,121	10,394	11,731	11,654	12,241	11,830	11,633	11,375	10,954	11,066	10,656	11,147	135,802
1983[1]	11,473	10,725	12,049	11,966	12,642	12,273	12,061	11,692	11,262	11,430	11,000	11,395	139,968
1984[1]	11,490	10,905											

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.417

Average Price Received by U.S. Farmers for All Milk[2] (Sold to Plants) In Dollars Per Cwt.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1972	5.95	6.04	6.07	6.09	6.23	6.14	6.02	6.06	5.97	6.02	6.15	6.29	6.07
1973	6.36	6.50	6.59	6.67	6.88	6.88	6.83	7.26	7.54	7.83	8.16	8.47	7.14
1974	8.89	8.92	8.96	8.84	8.26	7.69	7.75	7.75	8.08	8.35	8.49	8.27	8.33
1975	8.43	8.38	8.22	8.18	8.07	7.99	8.25	8.64	9.25	9.70	10.00	10.30	8.75
1976	10.10	9.76	9.75	9.40	9.25	9.14	9.43	9.70	9.84	9.96	9.89	9.72	9.66
1977	9.65	9.53	9.45	9.44	9.37	9.40	9.49	9.66	9.97	10.10	10.20	10.20	9.72
1978	10.20	10.20	10.20	10.10	10.10	10.00	10.10	10.50	10.90	11.30	11.60	11.80	10.60
1979	11.90	11.90	11.80	11.60	11.50	11.50	11.60	12.00	12.30	12.60	12.90	12.80	12.00
1980	12.80	12.80	12.80	12.70	12.60	12.50	12.60	12.80	13.20	13.70	14.00	14.10	13.00
1981	14.10	14.00	13.80	13.70	13.50	13.40	13.40	13.50	13.70	14.00	14.00	14.00	13.80
1982	14.00	13.80	13.70	13.50	13.20	13.20	13.20	13.30	13.60	13.80	13.90	13.90	13.60
1983[3]	13.90	13.80	13.60	13.60	13.30	13.20	13.20	13.30	13.50	13.80	13.90	13.70	13.60
1984[3]	13.60	13.40	13.20	13.10									

[1] Weighted average. [2] Adjusted for seasonal variation. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.418

Farm Price of Milk[1] Eligible for Fluid Market In Dollars Per Hundred Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	6.42	6.43	6.31	6.13	6.07	5.99	6.09	6.32	6.57	6.72	7.34	7.39	6.38
1973	6.84	6.90	6.83	6.68	6.67	6.68	6.85	7.45	8.13	8.55	8.89	9.02	7.42
1974	9.09	9.13	9.19	9.16	8.68	8.10	8.00	8.11	8.40	8.67	8.83	8.63	8.66
1975	8.77	8.70	8.51	8.46	8.33	8.24	8.51	8.89	9.49	9.91	10.20	10.50	9.02
1976	10.40	10.10	10.00	9.63	9.49	9.36	9.64	9.91	10.10	10.30	10.20	9.99	9.93
1977	9.91	9.79	9.67	9.63	9.56	9.61	9.72	9.91	10.20	10.40	10.50	10.40	9.96
1978	10.50	10.50	10.40	10.30	10.30	10.20	10.30	10.70	11.00	11.50	11.80	12.00	10.80
1979	12.00	12.10	11.90	11.80	11.70	11.60	11.80	12.20	12.50	12.80	13.10	13.00	12.20
1980	13.00	13.00	12.90	12.80	12.70	12.70	12.70	13.00	13.40	13.90	14.10	14.30	13.20
1981	14.20	14.20	14.00	13.80	13.70	13.60	13.60	13.70	13.90	14.20	14.20	14.20	14.00
1982	14.10	14.00	13.80	13.60	13.40	13.30	13.40	13.40	13.70	13.90	14.10	14.10	13.80
1983	14.10	14.00	13.80	13.70	13.50	13.30	13.30	13.50	13.70	13.90	14.10	13.90	13.70
1984	13.80	13.50	13.40	13.30									

[1] MILK, Standard Grade, 3.5% milkfat. Weighted average price per 100 pounds (f.o.b. city). *Source: Crop Reporting Board, U.S.D.A.* T.419

U.S. Milk-Feed Price Ratio[1] In Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Average
1978	1.50	1.52	1.51	1.47	1.49	1.43	1.45	1.54	1.59	1.64	1.62	1.63	1.53
1979	1.62	1.59	1.58	1.56	1.53	1.51	1.43	1.51	1.54	1.55	1.59	1.55	1.55
1980	1.54	1.57	1.55	1.55	1.53	1.50	1.47	1.42	1.39	1.42	1.40	1.38	1.48
1981	1.39	1.39	1.41	1.39	1.35	1.36	1.40	1.43	1.48	1.53	1.56	1.54	1.44
1982	1.55	1.53	1.53	1.51	1.46	1.46	1.47	1.49	1.56	1.61	1.62	1.60	1.53
1983	1.58	1.56	1.55	1.49	1.45	1.43	1.45	1.41	1.36	1.39	1.36	1.35	1.45
1984	1.33	1.33	1.33	1.32									

[1] Pounds of 16% protein ration equal in value to one pound of milk. *Source: Economics & Statistics Service, U.S.D.A.* T.420

Molasses

Preliminary USDA estimates placed the 1983/84 world production of industrial molasses at approximately 33.3 million tonnes, nearly 4 percent below the revised 1982/83 estimate of 34.8 million. Molasses, a byproduct of sugarbeet and sugarcane processing, is used primarily as a livestock feed and in alcohol and yeast production. The lower 1983/84 molasses output was generally attributed to the smaller world sugar production expected during the season due to inclement weather. Brazil is the world's largest producer of molasses, with an estimated 1983/84 output of 5.13 million tonnes. India is second with 3 million, and the USSR is third with 2.9 million tonnes.

Total U.S. imports of molasses during calendar 1983 amounted to nearly 1.65 million tonnes, almost 53 percent above the 1.08 million tonne figure recorded in 1982. At the same time, the dollar value of U.S. molasses imports in 1983 was $79.9 million compared with $59.9 million in the previous year, a rise of almost 34 percent reflecting much higher unit prices than a year ago. Major sources of U.S. imports were Guatemala, Dominican Republic, Mexico, Colombia and South Africa.

New Orleans prices for mostly bulk, wholesale cane molasses were $44 per ton in January 1983, rising to a peak of $72.50 by January 1984, a reflection of the drought-induced strengthened feed prices.

World Production of Molasses (Industrial) In Thousands of Metric Tons

Crop Year	Argentina	Brazil	Cuba[2]	France	W. Germany	India	Italy	Mexico	Philippines	Poland	Australia	United Kingdom	United States	USSR	World Total
1974–5	612	2,950	1,312	1,179	712	2,000	302	1,227	890	514	586	235	1,592	2,746	26,905
1975–6	557	2,400	1,364	1,013	842	1,700	330	1,227	1,050	642	620	255	1,813	2,735	27,244
1976–7	557	3,000	1,391	1,087	831	2,059	330	1,076	940	670	642	310	2,235	2,700	29,296
1977–8	599	5,400	1,436	1,050	781	2,971	340	1,340	808	656	642	100	2,195	3,242	33,530
1978–9	818	5,000	1,296	952	685	2,564	365	1,410	818	657	577	103	2,148	3,306	32,688
1979–0	789	4,800	1,185	958	653	1,582	390	1,260	818	653	598	350	2,054	3,062	30,052
1980–1	654	5,400	1,111	1,013	657	2,129	410	1,145	860	430	713	360	2,012	2,669	30,941
1981–2	565	4,520	1,200	1,404	836	3,400	500	1,373	944	665	719	350	2,051	2,385	34,343
1982–3[1]	541	5,110	1,050	1,379	770	3,300	370	1,450	950	636	726	450	1,900	2,530	34,864
1983–4[3]	540	5,130	1,150	995	650	3,000	380	1,400	855	652	664	400	1,940	2,900	33,305

[1] Preliminary. [2] Includes hi-test molasses. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.421

Salient Statistics of Industrial Molasses in the United States In Millions of Gallons

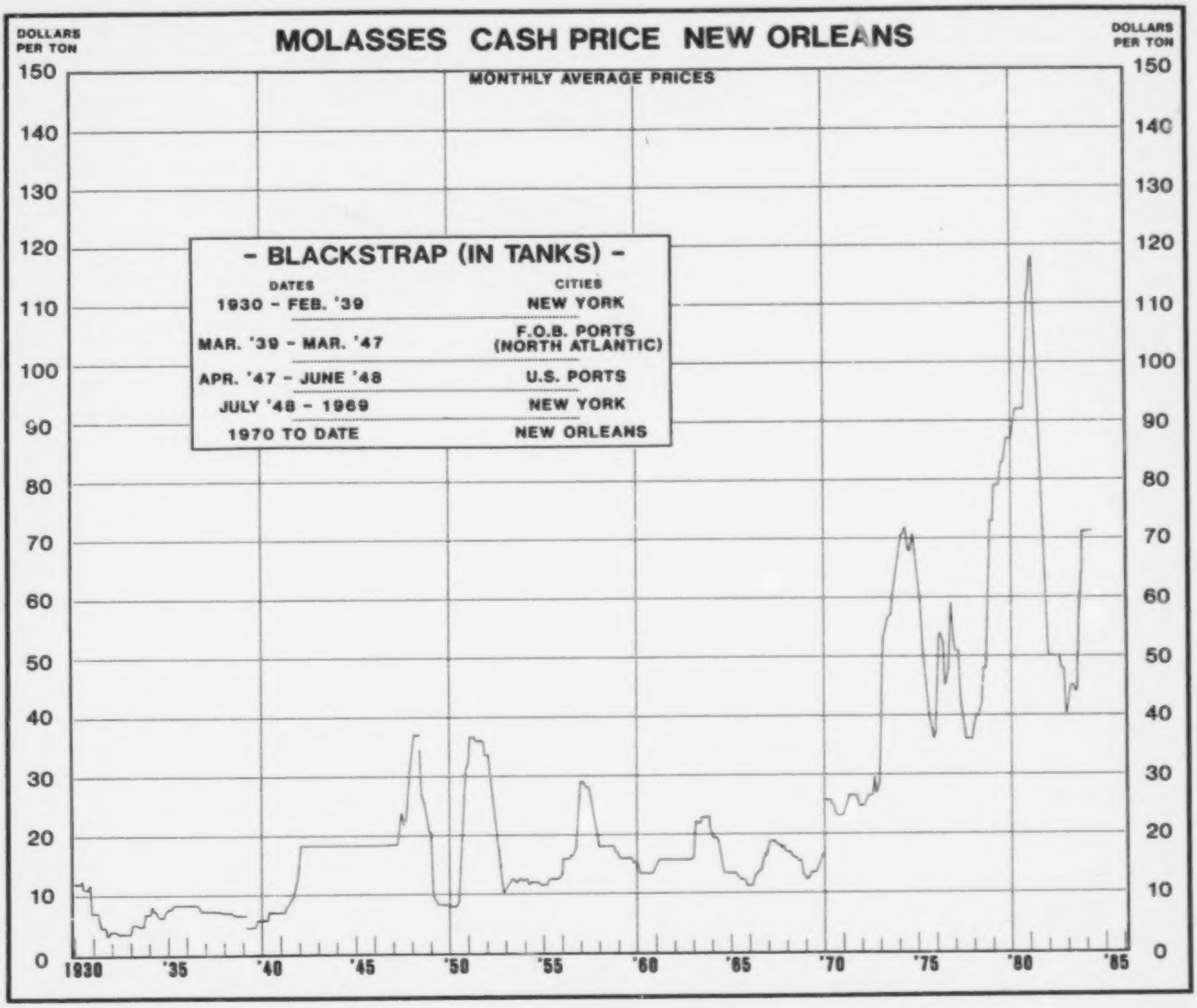
	Production in Mainland Areas									Domestic Utilization					
Year	Mainland Cane	Domestic Beet	Refiners' Blackstrap	Citrus	Hydrol	Total	Imports	Total Available Supplies	Exports	Distilled Spirits	Pharmaceuticals & Other Edibles	Yeast, Citric Acid & Vinegar	Total Industrial	Livestock Feeding[2]	Total Utilization
1974	102.1	155.9	45.0	10.6	23.5	337.1	384.3	755.3	12.6	18	59	100	175	559	739
1975	125.4	188.2	45.0	10.2	24.5	393.3	303.3	739.6	6.3	18	59	100	175	559	739
1976	131.7	158.0	50.3	5.8	37.0	382.9	411.2	829.7	11.2	6.9	60.0	100.5	167.4	572.2	740
1977	114.3	167.1	50.7	5.2	39.7	377.0	347.6	743.9	22.9	3.5	48.2	100.9	152.6	665.8	818
1978	106.7	140.2	44.6	4.3	41.7	337.5	271.0	639.8	20.3	7.4	25.6	92.7	125.7	618.2	744
1979	107.4	164.6	39.0	3.5	40.3	326.1	231.7	596.0	19.3	8.8	19.3	77.7	105.8	519.0	624.8
1980	109.7	113.3	34.7	6.3	39.7	303.7	140.3	468.8	23.7	8.2	18.8	77.5	104.5	364.3	468.8
1981	129.5	147.8	47.8	6.1	19.5	350.6	195.9	581.9	17.8	4.9	19.1	75.2	99.2	425.6	524.8
1982[1]	121.0	132.5	39.2	3.7	10.4	306.7	203.7	513.4	47.2						
1983[1]							309.9								

[1] Preliminary. [2] Residual. *Source: Agricultural Marketing Service, U.S.D.A.* T.422

U.S. Annual Average Prices of Molasses, by Types (F.O.B. Tank Car or Truck) In Dollars Per Ton[1]

	Blackstrap						Beet Molasses			Citrus Molasses
Year	New Orleans	South Florida	Baltimore	Minneapolis	Omaha	Calif. Ports	Colorado	Wyo. & Montana	Ore., Utah & Idaho	Florida
1974	68.37	67.40	72.25	88.63	88.37	70.82	78.65	78.65	71.26	45.81
1975	45.32	45.63	51.37	62.75	63.81	50.03	55.80	61.81	59.70	41.97
1976	52.07	51.41	57.60	72.28	70.46	52.96	66.87	65.02	61.79	39.52
1977	40.55	42.52	47.08	54.62	58.84	42.96	41.76	45.41	55.10	50.65
1978	51.50	52.40	59.25	67.30	72.55	54.00	60.40	58.35	60.95	61.05
1979	82.95	85.50	91.20	107.90	107.75	84.05	85.30	82.65	N.A.	79.40
1980	96.50	96.80	106.75	124.45	128.85	101.70	95.60	96.55	N.A.	103.65
1981[2]	84.90	90.00	99.30	111.20	119.40	89.20	85.30	95.20	N.A.	103.10

[1] Per ton prices are based on 171 gallons for blackstrap, beet and corn molasses and on 175 gallons for citrus molasses. Prices represent sales F.O.B. terminal to the general feed trade and do not include sales made under various pricing arrangements above or below prices generally available to the ultimate user. Ton—2,000 lbs. Gallon—U.S. gallon. Prices are now rounded off to the nearest 5 cents. [2] Preliminary. *Source: Molasses Market News, Annual Summary, AMS, U.S.D.A. Denver Colorado, and Molasses Market News, Weekly, various issues* T.423



Wholesale Price of Blackstrap Molasses (Cane) at New Orleans In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	24.20	24.60	25.00	26.50	26.50	26.50	26.50	26.50	25.60	25.20	24.80	24.80	25.56
1972	24.80	24.80	26.00	26.50	26.50	26.50	26.60	29.60	26.90	27.40	28.40	32.40	27.20
1973	43.20	48.90	53.40	55.20	56.40	57.00	57.00	60.10	60.80	64.20	65.50	67.75	57.45
1974	68.80	70.50	71.00	72.00	69.50	68.00	68.00	69.25	70.40	67.00	64.00	62.00	68.37
1975	60.00	57.75	51.30	50.00	46.00	43.00	41.00	39.00	38.00	36.00	37.00	46.00	45.42
1976	53.00	54.00	53.00	52.00	45.00	47.00	48.00	54.00	59.00	57.00	52.00	51.00	52.08
1977	51.00	51.00	48.00	42.00	40.00	38.00	36.00	36.00	36.00	36.00	36.00	38.00	40.67
1978	40.00	40.00	40.00	41.00	42.00	46.00	48.00	48.00	56.00	65.00	73.00	73.00	51.08
1979	79.00	79.00	79.00	79.00	81.00	83.00	83.00	85.00	87.00	87.00	87.00	87.00	83.00
1980	89.90	91.50	92.00	92.00	92.00	92.00	92.00	92.00	94.40	103.50	111.60	113.00	96.40
1981	116.75	118.00	115.00	103.00	95.50	88.00	83.00	71.60	67.50	58.75	52.00	50.00	76.30
1982	50.00	50.00	50.00	50.00	50.00	50.00	50.00	48.00	48.00	44.00	40.00	41.00	47.60
1983	44.00	45.00	45.00	45.00	47.50	49.40	53.75	61.50	68.75	72.50	72.50	72.50	56.45
1984	72.50	72.50	72.50	72.50									
1985													

Source: Economics Service, U.S.D.A.

T.424

Molybdenum

World mine production of molybdenum in 1983 was about 40 percent lower than in 1982, according to a U.S. Bureau of Mines estimate. Around one-half of world output comes from deposits mined primarily for molybdenum with the remainder largely obtained as a byproduct of large, low-grade copper deposits. The U.S. is the world's largest producer, followed by Canada, Chile, and the USSR. Resources of molybdenum are considered adequate to supply world needs for the foreseeable future.

Molybdenum is a refractory metallic element used primarily as an alloying agent in steels, cast irons, and as superalloys to enhance hardenability, strengthen, toughness, and wear and corrosion resistance. Molybdenum is added principally in the form of molybdic oxide or ferromolybdenum. It is also used in numerous chemical applications, including catalysts, lubricants, and pigments. There is little substitution for molybdenum in its major applications.

U.S. production of molybdenum in 1983 amounted to around 35.4 million pounds, sharply below the 65.4 million pounds (contained molybdenum) of gross production in 1982. All primary producers were closed for the first three quarters of 1983. The major reduction occurred in the output of molybdic oxides. U.S. mine production during most of 1983 was entirely from copper. Very little secondary molybdenum is recovered. Producers held large inventories and because of poor demand, reduced output and drew down stocks in 1983.

The reported U.S. end use consumption of molybdenum in 1983 was 24.5 million pounds, compared with 25.0 million in 1982, according to Bureau of Mines data.

The U.S. is a net exporter of molybdenum, and in 1983 exported 47.1 million pounds of ore and concentrate (contained molybdenum), slightly less than the 49.8 million pounds exported in 1982. U.S. exports are expected to continue to supply a large share of world demand.

U.S. industry stocks of molybdenum products (contained molybdenum) dropped to about 28.5 million pounds at the end of December, 1983, 42 percent below the 49.4 million pounds on hand a year earlier.

While molybdenum is a strategic element used in steels and alloys having important applications in the manufacturing and production of military armament, domestic reserves and production capacity have been considered adequate to supply national emergency needs, and there is no U.S. government stockpile of molybdenum.

U.S. dealers quoted molybdenum oxide within a range of $2.35 to $3.00 per pound and ferromolybdenum at $3.25 to $3.90 at the outset of 1983. By the end of 1983, dealers were quoting molybdenum oxide at $3.65 to $4.10, and ferromolybdenum for export at $4.40 to $4.60 per pound.

World Mine Production of Molybdenum   In 1,000 Pounds (Contained Molybdenum)

Year	Canada[3]	Australia	Bulgaria	Chile	USSR	Japan	South Korea	China	Mexico	Norway	Philip-Peru	United Total		World
1973	30,391			12,974	18,700	345	112	3,300	90	220	—	115,859	1,395	183,698
1974	30,736			21,466	19,400	235	166	3,300	95	—	—	112,011	1,434	185,568
1975	28,719	25		20,042	20,000	309	166	3,300	37	—	—	105,980	1,435	180,288
1976	32,229	0	300	24,028	20,600	485	265	3,300	35	—	—	113,233	999	195,474
1977	36,526	0	330	24,112	21,400	401	223	3,300	2	—	—	122,408	1,005	209,707
1978	30,739	—	330	29,092	21,800	163	485	4,440	24	—	121	131,843	1,607	220,604
1979	24,634	—	330	29,895	22,500	154	417	4,400	105	—	311	143,967	2,637	229,305
1980	26,211	—	330	30,133	22,900	124	661	4,400	163	—	130	150,686	5,926	241,664
1981[1]	31,160	—	330	33,863	23,600	164	1,025	4,400	994	—	176	139,900	5,485	241,097
1982[2]	36,290	—	330	44,092	24,300	216	882	4,400	992	—	132	83,050	5,655	200,339
1983[2]	20,000			32,000								30,000	6,000	120,000

[1] Preliminary. [2] Estimate. [3] Shipments. *Source: Bureau of Mines* T.425

U.S. Salient Statistics of Molybdenum   In Thous. of Pounds (of Contained Molybdenum)

	Concentrate							Primary Products[3]							
		Shipments						Net Production				Shipments			
Year	Production	Total (Includes Exports)	Value Mill. $	For Exports	Consumption	Imports for Consumption	Stocks Dec. 31[2]	Grand Total	Molybdic Oxide[4]	Molybdenum Metal Powder	Sodium Molybdate	To Domestic Destinations	For Exports	Consumption	Producers' Stocks Dec. 31
1974	112,011	118,163	234.7	39,965	91,706	155	18,659	88,509	66,378	2,953	1,784	75,929	38,870	63,476	16,078
1975	105,980	105,170	259.3	36,618	90,046	2,567	10,680	87,501	70,143	2,953	1,069	89,789	33,084	51,743	22,863
1976	113,233	114,527	333.5	30,935	84,966	2,093	9,390	83,970	65,743	3,839	1,132	99,144	31,796	50,448	13,210
1977	122,408	124,974	450.4	29,666	91,041	1,976	9,161	90,520	68,671	4,142	1,275	100,626	33,332	54,557	10,141
1978	131,843	130,694	608.0	31,183	96,375	2,705	8,980	96,052	83,220	4,194	1,489	105,921	35,353	61,091	7,996
1979	143,967	143,504	871.1	36,405	103,152	2,329	9,520	101,752	79,035	4,946	1,541	109,419	35,773	60,388	8,502
1980	150,686	149,311	1,344	35,026	108,206	1,825	18,101	106,284	84,554	4,904	1,142	95,391	35,557	53,265	27,007
1981	139,900	118,916	946	32,735	80,725	1,988	35,043	105,824	59,645	3,513	96	64,368	20,004	50,189	44,961
1982[1]	83,050	77,789	515	21,870	49,444	3,115	35,527	65,381	35,354	3,304	121	47,884	23,375	27,665	49,401
1983[5]	27,880	44,474		20,943	26,873		14,309	35,431	11,039	3,667	191	49,359			28,483

[1] Preliminary. [2] At mines & at plants making molybdenum products. [3] Comprises ferromolybdenum, molybdic oxide, & molybdenum salts & metal. [4] Includes molybdic oxide briquets, molybdic acid, & molybdenum trioxide. [5] Estimate. *Source: Bureau of Mines* T.426

Nickel

World mine production of nickel in 1983 was about 6 percent lower than in 1982, according to U.S. Bureau of Mines estimate. The USSR accounted for 29 percent of estimated production, followed by Canada with 16 percent and Australia with 14 percent. U.S. production of nickel is insignificant. The Hanna Mining Co., the nation's only integrated nickel producer reopened its mine and smelter in Riddle, Oregon in late 1983 after an 18-month shutdown.

The U.S. relies heavily on imports of nickel—net import reliance is estimated around 77 percent of apparent consumption. Imports of nickel in 1983 were 18 percent higher than in 1982. The major suppliers were Canada—35 percent; Australia—16 percent; Botswana—11 percent; Norway—8 percent; and the Dominican Republic—5 percent.

Reported domestic consumption of nickel increased 18 percent in 1983, compared to 1982 use. The improvement in 1983 consumption, marking a reversal of a 3-year downward trend, was paced by gains in the stainless steel and high-nickel alloy markets. The Bureau of Mines forecast further gains in U.S. consumption of nickel in 1984.

Market developments in 1983 included the lifting on October 18 of a 4-month 7 percent anti-dumping duty on Soviet nickel exports to the EEC; and on November 21, the U.S. announced that all unfabricated nickel and nickel-bearing materials imported directly or indirectly from the USSR would be banned, effective December 21. It was stated that this measure was taken to enforce the ban on importation of nickel from Cuba into the U.S.

Ending stocks of nickel (exclusive of scrap) held by consumers in the U.S. totaled 35.3 million pounds, 11 percent higher than at the end of 1982.

World Mine Production of Nickel In Thousands of Short Tons of Contained Nickel

Year	Australia[3]	Philippines	Canada	Cuba	Finland[3]	Indonesia	Brazil	Domin. Repub.	Zimbabwe	N. Caledonia	Greece	Botswana	South Africa	USSR	United States	World Trade
1975	40.0	10.3	367.0	40.3	6.1	21.2	3.5	29.7	11.0	146.9	31.0		22.9	168.0	17.0	890.5
1976	91.0	16.8	265.5	40.7	7.2	31.7	5.8	26.9	16.1	121.2	18.8		24.7	155.0	16.5	873.4
1977	94.7	40.5	256.3	40.5	6.7	36.5	4.7	27.4	18.4	124.9	24.9	13.3	25.1	162.0	14.3	412.9
1978	90.8	32.5	141.4	36.7	7.9	34.6	4.0	15.8	17.3	71.8	20.4	17.7	31.6	164.0	13.5	725.4
1979	76.8	36.7	139.4	34.3	6.4	34.2	3.3	27.7	16.1	88.7	22.2	17.8	33.3	166.0	15.1	750.1
1980	81.9	51.9	203.7	40.4	7.2	33.9	6.4	18.0	16.6	95.5	16.8	17.0	28.3	170.0	14.7	836.3
1981[1]	82.1	33.9	176.6	42.5	7.6	34.2	7.2	20.6	14.4	86.1	17.2	18.2	29.1	174.0	12.1	784.5
1982[2]	90.6	22.0	97.8	39.3	7.6	32.0	6.2	6.6	14.3	65.0	16.8	19.6	24.3	187.0	3.2	669.8
1983[2]	90.0	20.0	100.0	40.0		25.0				35.0		20.0	25.0	185.0	.4	630.0

[1] Preliminary. [2] Estimate. [3] Content of nickel sulfate and concentrates. *Source: Bureau of Mines* T.427

Salient Statistics of Nickel in the United States In Short Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production		Nickel Consumed[1], By Uses										Stocks, Dec. 31	Nickel & Pdt's (Gross Weight)	
		Primary	Secondary	Alloy Steels	Cast Irons	Copper Base Alloys	Magnet Alloys	Electroplating Anodes	Nickel Alloys	Stainless & Heat Resisting Steels	Super Alloys	Chemicals	Total All	At Consumers' Plants	Imports	Exports
1976	72	13,869	13,273	19.1	4.0	7.4	5.8	28.7	32.5	48.6	9.1	2.6	162,927	31,690	188,147	47,166
1977	75	12,897	12,449	17.8	3.7	7.0	.7	21.8	31.9	53.2	11.4	2.5	155,260	18,581	194,770	39,412
1978	80	11,298	12,304	17.2	4.3	7.0	.8	27.3	39.6	60.5	15.7	1.9	180,723	20,443	234,352	36,293
1979	75	11,691	13,201	20.2	4.7	8.5	.7	28.5	41.1	69.6	17.6	1.2	196,293	19,518	177,205	50,810
1980	76	11,225	11,338	16.9	4.0	8.8	.5	18.8	27.4	54.7	19.2	1.5	156,299	15,231	189,188	56,675
1981	75	10,305	11,696	16.5	3.7	10.6	.5	22.3	10.6	50.6	13.5	2.0	144,851	22,508	209,008	46,836
1982[2]	76	3,456		10.0	1.9	4.3	.4	20.9	17.9	32.2	11.0	2.0	103,981	18,853	129,787	57,029
1983[3]	77			18.4	1.2	11.0	.8	45.0	11.0	70.9	19.4	2.2	122,000	35,299	144,000	70,000

[1] Exclusive of scrap. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines* T.428

Average Price of Nickel (Spot Cathode Sheets, Duty Paid, F.O.B. Refinery) In Cents Per Pound—In Carload or Truckload Lots

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	220.0	220.0	220.0	220.0	220.0	220.0	220.0	220.0	220.0	241.0	241.0	241.0	225.3
1977	241.0	241.0	241.0	238.0	241.0	241.0	241.0	241.0	215.5	215.5	210.0	207.0	231.1
1978	207.0	207.0	207.0	210.0	210.0	200.0	208.0	208.0	204.0	202.5	202.5	196.5	205.2
1979	196.5	205.0	205.0	242.5	272.5	305.0	302.5	302.5	302.5	302.5	302.5	315.0	271.2
1980	325.0	325.0	350.0	350.0	350.0	350.0	350.0	350.0	305.0	305.0	305.0	305.0	345.8
1981	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	339.5	349.2
1982	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0
1983	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0
1984	329.0												

Source: Bureau of Labor Statistics (1022-0128) T.429

Oats

U.S. oats production in 1983 amounted to an estimated 477 million bushels, 23 percent less than the 1982 crop of 621 million and the second smallest crop since 1882. A decrease in acres harvested for grain and a lower average yield due to hot, dry weather resulted in the lower 1983 production. Seeded area totaled 20.3 million acres compared with 14.3 million in 1982. Acres abandoned and used for purposes other than grain accounted for 55 percent of the planted acres compared with 26 percent of the 1982 crop and 31 percent in 1981. The 9.1 million acres harvested for grain was 14 percent below a year earlier and 3 percent below 1981. The PIK program for corn resulted in extensive use of oats as a cover crop on corn ground. Yield per harvested acre for grain averaged 52.5 bushels in 1983 compared with the record high yield of 58.4 bushels a year earlier.

While 1983 oat production was significantly lower than a year earlier, total supply for the 1983/84 season (June/May) amounted to about 735 million bushels, only about 5 percent less than in the 1982/83 season because beginning stocks (230 million bushels) were considerably above the record low 152 million bushels on hand at the start of the 1982/83 season. Imports also added to the 1983/84 oat supply. More than one-half of the estimated 28 million bushel imports occurred during the June–December 1983 period, with Canada, and Sweden the major sources of the imports. This was the first time since the mid-1950's that the U.S. imported above 5 million bushels of oats within a crop year.

During the summer of 1983, oats were priced particularly low relative to corn, based on both historical price relationships and relative feeding values. (The farm value of oats averaged $1.49 per bushel in June–September 1983, compared with the average farm price for corn of $3.21. Based on the relative feeding value of oats, the price of oats should have been nearly $1.65 per bushel, and based on the historical relationship between oats and corn prices during the oat crop year (June–May), the price could have been around $1.87 per bushel. Consequently, feed use—the major market for oats—amounted to an estimated 193 million bushels during June–September, up 14 percent from a year earlier. The total use of oats during October–December was 132 million bushels, the largest use for that quarter since 1974. However, January–March 1984 disappearance of 109 million bushels was 23 percent below that for the comparable quarter in 1983. Total feed use for the entire 1983/84 season was estimated at 480 million bushels compared with 459 million in 1982/83.

Stocks of oats in the U.S. at the end of the 1983/84 season were projected by the USDA at 172 million bushels, down from 230 million a year earlier.

As of March 31, 1984 net oats under loan amounted to 2.43 million bushels compared with 4.14 million a year earlier. CCC inventory amounted to about 1.4 million bushels versus 0.7 million a year earlier, and there were 4.1 million bushels in the farmer-owned reserve (FOR) versus about 5.1 million bushels a year earlier.

U.S. oat producers planned to seed 13.6 million acres to oats in 1984, according to the USDA Prospective Plantings report issued in February 1984, 33 percent fewer acres than planted in 1983 when there was a PIK program for corn. Canadian oats acreage intentions for the 1984 crop were up 9 percent from 1983 plantings.

U.S. Government Support Program

The 1984 crop national average loan level for oats is $1.31 per bushel versus $1.36 for the 1983 crop. The target price for 1984 crop oats is $1.60 per bushel, unchanged from 1983.

Futures Markets

Oat futures are traded on the Chicago Board of Trade and on the Winnipeg Commodity Exchange.

World Production of Oats In Thousands of Metric Tons

Crop Year	Argentina	Australia	Canada	China	Denmark	France	Netherlands	Poland	Spain	Sweden	Turkey	United States	USSR	Un. King.	W. Germany	World Total
1975–6	433	1,141	4,466		367	1,948	158	2,920	609	1,345	390	9,551	12,495	795	3,445	47,044
1976–7	530	1,073	4,831		256	1,402	103	2,695	505	1,251	400	7,930	18,113	764	2,497	48,744
1977–8	570	991	4,303	1,515	288	1,928	94	2,561	421	1,416	370	10,901	18,407	790	2,714	51,508
1978–9	676	1,763	3,621	1,500	206	2,203	140	2,492	553	1,550	370	8,730	18,507	706	4,049	51,753
1979–0	522	1,411	2,978	1,600	163	1,845	109	2,186	456	1,524	370	7,643	15,200	542	3,697	45,165
1980–1	433	1,128	3,028	1,800	160	1,927	94	2,245	680	1,567	355	6,652	15,544	601	3,249	44,543
1981–2	339	1,619	3,158	1,700	175	1,774	115	2,731	445	1,816	325	7,391	15,000	620	3,200	45,346
1982–3[1]	524	800	3,776	1,800	177	1,726	136	2,621	474	1,658	315	9,007	15,500	590	3,777	48,308
1983–4[2]												6,928				

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A* T.434

United States Official Oat Crop Production Reports In Thousands of Bushels

Year	July 1	Aug. 1	Sept. 1	Dec.	Final	Year	July 1	Aug. 1	Sept. 1	Dec.	Final
1975	731,431	697,834	677,754	656,862	638,960	1980	449,504	440,655	450,660	457,593	458,263
1976	498,938	548,542	563,997	562,452	540,441	1981	528,118	522,408	509,457	508,083	509,167
1977	707,074	757,589	758,669	747,914	752,774	1982	580,288	591,478	599,008	616,981	620,509
1978	635,551	636,785	595,879	601,477	581,657	1983	519,002	504,201	472,541	477,303	
1979	509,761	530,967	531,232	534,386	526,551	1984					

Source: Crop Reporting Board, U.S.D.A. T.431

Production of Oats in the United States, by States In Millions of Bushels

Year	Illinois	Indiana	Iowa	Michigan	Minnesota	Missouri	Nebraska	New York	No. Dakota	Ohio	Pennsylvania	So. Dakota	Texas	Wisconsin	California
1973	19.8	11.8	67.0	16.5	145.4	1.4	21.1	18.5	73.8	25.9	18.4	100.6	26.7	56.2	—
1974	23.1	10.1	78.4	19.3	101.0	4.0	25.1	20.7	44.1	29.5	20.3	81.1	8.1	85.4	—
1975	24.9	12.4	75.5	20.7	104.0	3.3	28.9	20.4	56.2	30.9	19.9	98.1	19.5	74.3	—
1976	22.4	10.2	82.6	19.6	94.8	5.4	27.7	17.3	44.8	28.5	18.1	42.6	14.4	55.0	—
1977	20.7	8.0	82.4	18.7	161.8	7.3	40.6	15.4	60.0	24.8	18.6	132.3	24.0	76.1	5.3
1978	15.4	7.3	60.9	23.4	98.8	1.3	21.2	17.7	62.6	20.7	18.0	95.8	13.8	62.7	3.8
1979	15.6	6.4	63.0	18.9	84.9	2.0	21.2	18.0	37.0	20.3	18.4	94.4	16.8	55.9	4.1
1980	14.0	5.9	62.0	20.1	82.7	2.0	15.6	17.9	13.5	19.4	19.0	66.0	12.6	58.7	4.3
1981	13.5	5.5	59.5	21.1	90.1	4.6	15.8	17.9	44.2	17.0	20.0	70.5	18.9	52.6	3.6
1982	11.8	6.1	56.0	28.4	107.6	3.2	26.7	18.2	62.1	23.8	19.8	133.8	10.7	48.4	2.8
1983[1]	12.6	4.6	38.3	15.6	77.0	2.5	13.6	11.4	63.6	15.4	16.2	79.2	24.0	44.2	2.6

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

T.437

Oats Supply and Utilization in the United States

Crop Year Beginning June 1	Acreage Planted	Acreage Harvested	Yield	Production	Total supply[2]	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price[3]	Nat. avg. supp. rate
	—Mil. acres—		Bu/acre	—Mil. bu—							$/bu.	
1979/80	14.0	9.7	54.4	527	808	492	76	4	572	236	1.36	1.08
1980/81	13.4	8.7	53.0	458	696	432	74	13	519	177	1.79	1.08
1981/82	13.7	9.4	54.1	509	688	453	76	8	536	152	1.89	1.24
1982/83[1]	14.3	10.6	58.4	621	777	459	85	3	547	230	1.48	1.31
1983/84[1]	20.3	9.1	52.5	477	725	480	80	5	565	160	1.65	1.36
1984/85[1]	13.6											

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

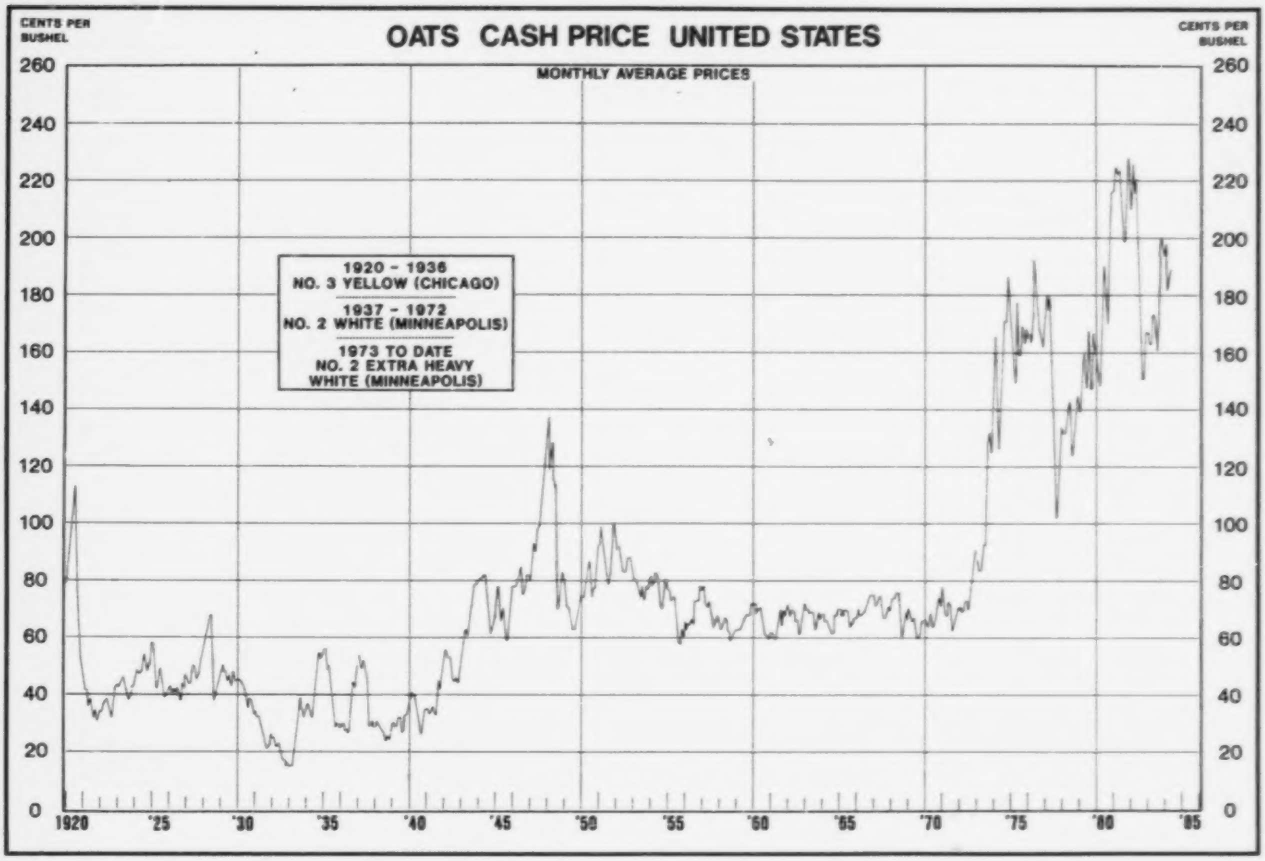
T.430

Quarterly Supply and Distribution of Oats in the United States In Millions of Bushels

Year & Periods Begin. June 1	Supply				Disappearance							Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Bever.	Seed	Feed	Total	Exports	Total Disap.	Gov't. Owned[2]	Privately Owned[3]	Total Stocks
1979–80	280.0	526.6	.9	807.5	40.7	—	34.6	491.7	567.0	4.1	571.1	2.7	233.7	236.4
June–Sept.	280.0	526.6	.3	806.9	14.6	—	1.7	221.6	237.9	.9	238.8	2.6	565.5	568.1
Oct.–Dec.	568.1	—	.2	568.3	10.4	—	1.7	77.5	89.6	1.9	91.5	2.6	474.2	476.8
Jan.–Mar.	476.8	—	.2	477.0	10.3	—	6.9	119.7	136.9	.5	137.4	2.7	336.9	339.6
Apr.–May	339.6	—	.2	339.8	5.4	—	24.3	72.9	102.6	.8	103.4	2.7	233.7	236.4
1980–1	236.4	458.3	1.3	696.0	41.0	—	33.0	431.8	505.8	13.3	519.1	2.5	174.4	176.9
June–Sept.	236.4	458.3	.6	695.3	15.0	—	1.8	190.0	206.8	3.9	210.7	2.7	481.9	484.6
Oct.–Dec.	484.6	—	.2	484.8	10.0	—	1.8	79.2	91.0	2.8	93.8	2.7	388.3	391.0
Jan.–Mar.	391.0	—	.3	391.3	10.0	—	7.0	115.6	132.6	2.6	135.2	2.5	253.6	256.1
Apr.–May	256.1	—	.2	256.3	6.0	—	22.4	47.0	75.4	4.0	79.4	2.5	174.4	176.9
1981–2	176.9	509.2	1.6	687.7	41.2	—	35.4	452.5	529.1	6.6	535.7	.7	151.3	152.0
June–Sept.	176.9	509.2	.3	686.4	16.0	—	2.0	206.7	224.7	3.2	227.9	1.7	456.8	458.5
Oct.–Dec.	458.5	—	.2	458.7	10.0	—	2.0	80.3	92.3	1.2	93.5	1.7	363.5	365.2
Jan.–Mar.	365.2	—	.2	365.4	10.0	—	7.3	110.0	127.3	1.2	128.5	1.7	235.2	236.5
Apr.–May	236.9	—	.9	237.8	5.2	—	24.1	55.5	84.8	1.0	85.8	.7	151.3	152.0
1982–3[1]	152.0	620.5	3.9	776.4	41.7	—	43.3	458.2	543.2	3.0	546.2	.7	229.5	230.2
June–Sept.	152.0	620.5	.8	773.3	16.2	—	2.0	170.3	188.5	1.3	189.8	.6	582.9	583.5
Oct.–Dec.	583.5	—	.2	583.7	10.0	—	2.0	95.1	107.1	1.0	108.1	.7	474.9	475.6
Jan.–Mar.	475.6	—	1.6	477.2	10.7	—	7.6	124.8	143.1	.3	143.4	.7	333.1	333.8
Apr.–May	333.8	—	1.3	335.1	4.8	—	31.7	68.0	104.5	.4	104.9	.7	229.5	230.2
1983–4[4]	203.2	477.3	18.0	725.5	———80.0———			480.5	560.5	5.0	565.5			160.0
June–Sept.	230.2	477.3	11.7	719.2	15.8	—	1.9	195.4	213.1	.8	213.9	1.1	504.2	505.3
Oct.–Dec.	505.3	—	4.9	510.2	9.9	—	1.9	119.2	131.0	.7	131.7	1.4	377.1	378.5
Jan.–Mar.														

[1] Preliminary. [2] Uncommitted inventory. [3] Includes quantity under loan & farmer-owned reserve. [4] Estimate. *Source: Economic Research Service, U.S.D.A.*

T.436



OATS CASH PRICE UNITED STATES

Average Cash Price[1] of No. 2 Extra Heavy White Oats at Minneapolis In Cents Per Bushel

													— Average Prices — — No. 2 Heavy —	
Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]	White, Portland	Toledo
1972-3	69.0	70.0	71.0	76.0	81.0	91.0	88.0	84.0	84.0	86.0	91.0	93.0	80.0	102	88
1973-4	93.0	128	132	126	125	132	155	166	152	126	135	143	130	157	140
1974-5	163	168	171	187	180	174	164	164	149	172	178	159	168	196	175
1975-6	159	170	168	164	169	165	167	166	164	167	172	193	166	186	154
1976-7	184	167	167	166	162	167	178	180	176	181	168	138	174	180	171
1977-8	115	102	111	117	134	132	132	132	133	140	143	136	127	144	136
1978-9	124	128	136	139	147	140	147	154	160	148	155	168	143	179	137
1979-0	160	147	155	165	167	159	152	150	148	152	162	188	157	187	160
1980-1	190	170	186	196	215	216	220	225	223	221	223	218	209	242	217
1981-2	202	199	202	209	228	210	223	226	216	221	216	212	214	236	223
1982-3	187	153	151	151	167	167	167	163	163	173	171	167	165	218	155
1983-4[2]	160	179	194	200	197	194	198	182	187					193	196

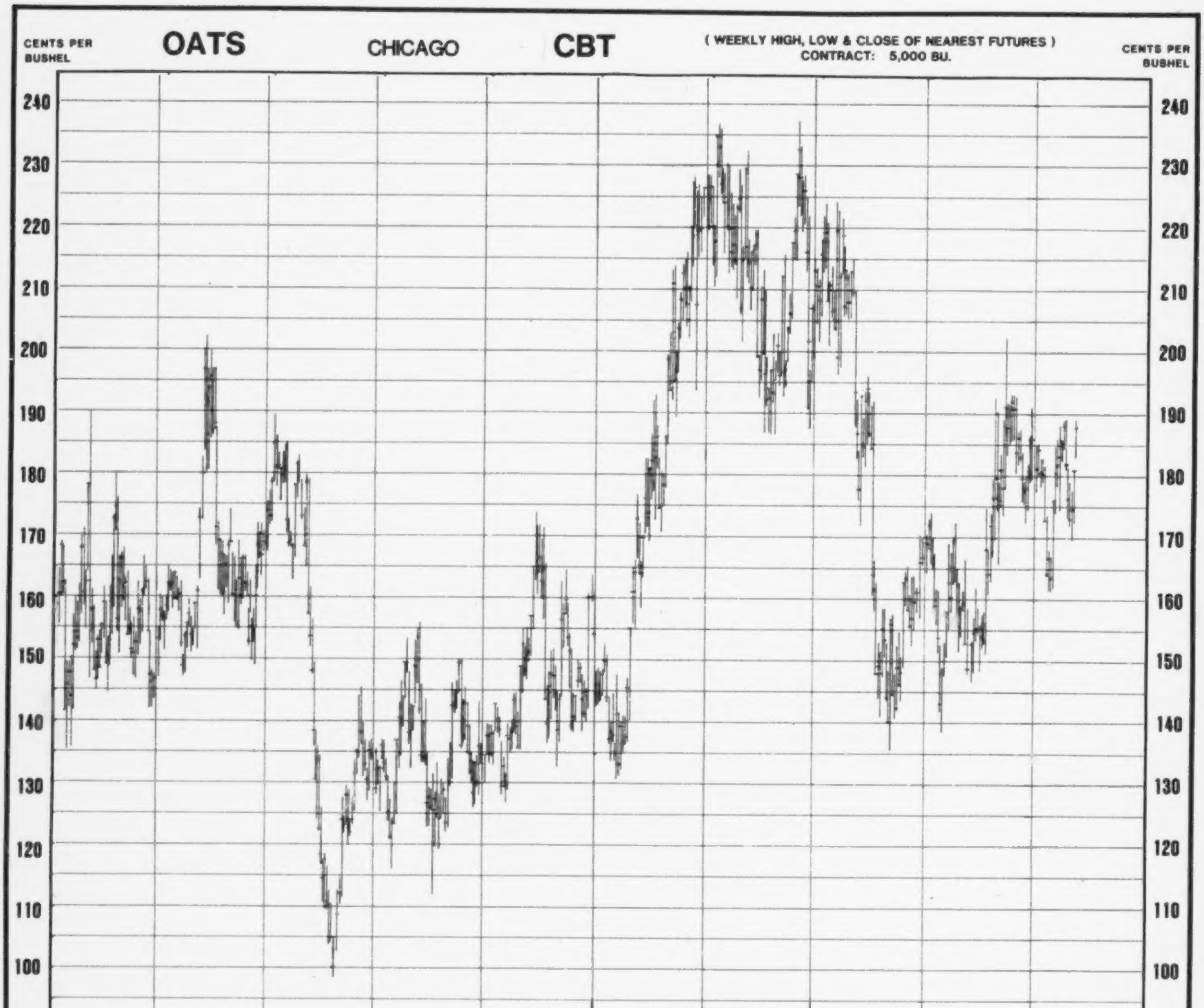
[1] Weighted average of reported daily cash sales. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.435

OATS

Average Price Received by U.S. Farmers for Oats In Cents Per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]
1972–3	65.5	62.3	64.5	67.1	70.0	80.6	81.1	77.6	77.1	77.4	79.6	90.4	72.5
1973–4	85.5	113	109	114	113	120	132	144	140	124	127	130	118
1974–5	137	155	157	168	170	170	162	158	146	151	154	149	153
1975–6	145	144	145	141	140	142	144	146	146	144	147	164	146
1976–7	164	148	149	146	145	151	158	163	164	164	152	129	156
1977–8	102	92.9	93.8	104	110	113	118	122	117	119	124	116	110
1978–9	108	106	106	108	115	119	122	125	127	129	129	135	120
1979–0	133	124	129	131	141	131	139	137	134	138	143	148	136
1980–1	150	153	163	165	184	192	198	201	208	205	205	199	179
1981–2	184	172	174	178	188	194	197	199	202	199	199	188	189
1982–3	157	139	135	132	140	144	146	148	149	154	154	150	145
1983–4	146	145	155	162	167	173	182	188	182	177			

[1] Weighted average by sales. *Source: Crop Reporting Board, U.S.D.A.* T.433



Oats Under Price Support Through the End of the Month (Cumulative Total from Current Season's Crop) In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1971-2	1.6	18.4	46.9	61.4	66.9	70.2	76.8	78.3	79.4	80.9	81.7	81.8	81.9
1972-3	.5	5.3	18.8	25.8	28.5	29.6	31.1	31.4	31.6	31.7	31.8	31.8	31.8
1973-4	.4	4.4	7.5	8.7	9.6	10.0	10.3	10.3	10.4	10.4	10.4	10.4	10.4
1974-5	.3	1.8	2.9	3.4	3.6	3.7	3.8	3.8	3.9	3.9	3.9	3.9	3.9
1975-6	.4	1.5	2.0	3.0	3.2	3.7	3.8	3.9	3.9	3.9	3.9	3.9	3.9
1976-7	.4	1.0	1.7	2.6	3.4	4.0	4.2	4.3	4.4	4.4	4.4	4.4	4.4
1977-8	7.8	30.0	48.5	54.9	59.5	62.3	65.3	67.1	73.2	76.1	77.9	78.9	78.9
1978-9	.5	8.2	14.9	18.5	21.2	22.4	23.9	24.2	24.5	24.7	24.8	24.8	24.8
1979-0	—	2.2	5.0	7.1	8.7	9.5	10.5	11.0	11.6	12.1	12.2	12.2	12.2
1980-1	—	1.8	3.4	4.4	4.9	5.7	6.0	6.1	6.2	6.3	6.3	6.3	6.3
1981-2	.6	3.4	6.1	7.4	8.0	8.7	9.3	9.5	9.6	9.6	9.6	9.6	9.6
1982-3	.1	1.2	4.0	5.8	6.9	7.7	8.3	8.5	8.8	9.0	9.1	9.1	
1983-4	.1	1.0	1.4	2.8	3.1	3.2	3.4	3.5	3.5				

Source: U.S. Department of Agriculture

T.432

High, Low & Closing Prices of May Oats Futures at the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery								Delivery Year					Life of Delivery Range
		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	—	136½	130	136¾	140	146	143	138¾	136½	146½	153¼	146½	153¼
	Low	—	—	120¾	115	127	129½	134	133	128	122	123	136	132¼	115
	Close	—	—	120¾	129½	133¼	134¾	140	138	135	122½	142	138	143	—
1979	High	172	163	154	148¼	155	162¼	158¾	152	147½	152½	142¾	144½	155	172
	Low	164	144	138	137½	144½	148½	146½	140½	137¼	137	133½	135½	138	133½
	Close	164	147¾	148½	145½	151½	155	148½	140½	142¾	137¾	137	138¼	148¾	—
1980	High	173½	196	189½	180¾	181	184½	172¼	172	169¾	162	153	147	171	196
	Low	169½	169¼	162¼	164	167	160	161	163¼	152½	144½	131	133¼	147	132
	Close	170½	184½	166	178	177¾	165¼	168	168¾	154¾	148	133¼	146½	168	—
1981	High	189	191	219½	217½	227	228	244½	244	232½	237	225¾	229½	232¼	244¼
	Low	181	179½	189	197½	207½	210	216½	210½	210½	212	206½	206	201	179½
	Close	183	189	212½	217	218	221	243½	226¾	216¼	224¼	223	213	224½	—
1982	High	231½	230	222½	217	194½	207	222½	212	209½	213¼	206	221¾	215	231½
	Low	226¼	212½	210	193	180½	185¼	197¾	177½	193¾	191½	186	202¾	200¼	177½
	Close	229¼	215	216	194½	185¾	205¾	206	200¼	207¾	199	203¼	208	207	—
1983	High	196	185	182½	177½	175	172¼	184½	179¾	181¼	175½	169	172½	163½	196
	Low	188½	173½	164	158½	163½	161	165½	172	172¼	149	151	151¾	154	149
	Close	189	176½	167¾	171	170¼	164	177½	174½	174½	149¼	160¼	155¾	157¼	—
1984	High	185	183½	200	226	220	206	199½	192¼	188	181½	185½	189¼		
	Low	179½	177	181	189½	199¼	193	184½	180½	178	163	169	169¾		
	Close	179½	181½	197½	200	206	193	184½	188¾	180	168¾	185½	171		

Source: Chicago Board of Trade

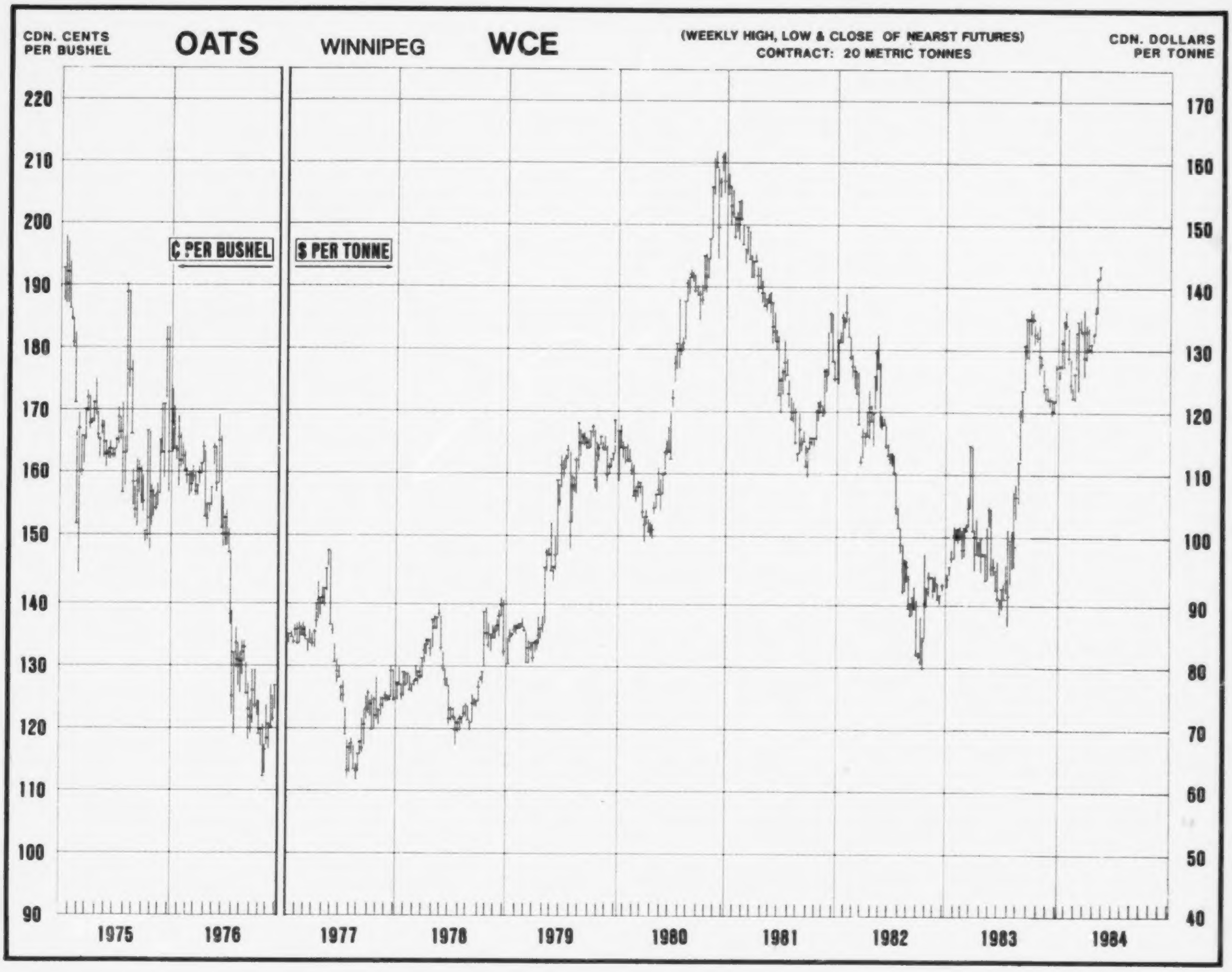
T.439

Month End Open Interest of Oats at the Chicago Board of Trade & Winnipeg Commodity Exchg.

Year	Chicago (In Millions of Bushels)												Winnipeg (In Contracts)			
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mar.	June	Sept.	Dec.
1978	13.4	16.8	16.2	23.1	23.9	22.6	34.8	42.9	49.6	56.3	35.2	29.6	1,765	2,553	3,235	2,213
1979	31.1	32.8	24.4	29.8	25.4	28.8	27.0	32.2	29.2	28.6	26.2	25.8	2,515	2,778	3,085	2,635
1980	23.8	23.2	17.5	23.2	21.2	25.8	35.3	41.3	41.6	39.5	37.6	27.6	2,827	2,315	3,178	3,598
1981	36.2	36.7	27.0	25.2	27.8	29.7	25.3	23.9	29.0	45.6	42.4	34.6	3,295	2,625	2,203	1,863
1982	36.5	39.6	40.5	40.5	43.4	45.8	43.4	32.6	30.5	31.4	23.7	21.5	1,298	1,185	1,155	1,225
1983	30.8	35.8	43.3	45.1	48.8	42.5	49.8	48.2	41.8	36.7	26.0	22.1	1,202	1,313	3,170	1,978
1984	21.8	24.3	23.7	21.5									1,529			

Source: Chicago Board of Trade & Winnipeg Commodity Exch.

T.438



Volume of Trading in Oats Futures at Chicago Board of Trade[1] In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1971-2	21.2	19.1	15.7	17.7	15.9	15.4	17.0	14.2	16.1	23.0	12.3	8.0	195.6
1972-3	19.4	22.3	19.7	12.1	16.2	39.0	28.1	30.5	26.5	30.4	73.9	123.1	441.2
1973-4	134.1	173.0	106.7	108.5	449.9	70.0	75.6[1]	86.5	96.4	83.3	91.7	80.5	1,556.2
1974-5	86.5	106.4	86.8	71.6	59.5	59.4	73.9	57.2	54.7	69.9	82.9	64.3	873.1
1975-6	71.6	74.7	62.2	53.8	56.8	50.7	37.9	41.5	39.8	25.4	44.7	82.0	641.1
1976-7	95.0	72.9	64.5	44.1	44.5	32.2	39.3	39.5	41.6	44.9	41.8	54.2	614.5
1977-8	53.8	55.3	44.6	35.0	66.1	33.8	31.4	37.7	59.7	80.2	68.8	98.5	664.9
1978-9	103.8	121.3	120.0	149.0	141.0	67.7	59.3	93.9	51.6	95.4	87.1	135.7	1,225.3
1979-0	127.8	111.6	76.1	98.6	96.0	47.1	56.9	85.3	53.8	81.1	131.5	144.8	1,110.6
1980-1	200.4	183.9	199.6	197.1	167.9	151.0	124.8	170.2	129.2	136.4	120.5	162.2	1,943.2
1981-2	125.3	134.6	117.0	144.5	264.9	221.0	166.7	184.7	204.3	223.6	196.5	247.9	2,231.0
1982-3	221.0	218.9	151.2	113.2	127.6	82.5	121.1	154.0	141.3	213.6	159.1	159.7	1,863.2
1983-4	160.1	254.5	180.4	95.1	102.4	57.9	58.9	91.9	77.1	89.8			

[1] Data prior to Jan. 1974 are for ALL CONTRACT MARKETS IN THE U.S. *Source: Chicago Board of Trade* T.440

Olive Oil

World production of olive oil in the 1983/84 season was estimated by the USDA in March 1984 at 1.28 million metric tons, almost 42 percent below the 2.19 million tonnes produced in 1982/83, as the biennial production decline occurred in the Mediterranean Basin countries. The sharp variations in year-to-year production can be attributed to the synchronizing of the biennial production cycle for several of the largest producers, including Spain, Greece, Italy, Turkey, and Tunisia.

Although 1983/84 beginning world stocks were estimated at a record-large 997 thousand tonnes, total world supply of olive oil for the 1983/84 season (at an estimated 2.28 million tonnes) was 19 percent below estimated 1982/83 supply of 2.82 million.

World exports of olive oil in the 1983/84 season were expected to decline to 271 thousand tonnes from the previous season's 343 thousand tonnes. Most olive oil production is consumed domestically.

Total world use of olive oil in 1983/84 was estimated by the USDA at 1.61 million tonnes, only 12 percent below estimated 1982/83 use of 1.82 million tonnes.

World stocks of olive oil at the end of the 1983/84 season were estimated by the USDA at 673 thousand tonnes, down 32 percent from the record-high level at the end of 1982/83. Projected 1983/84 ending stocks represented 29.5 percent of estimated usage in the 1983/84 season, down from 35.4 percent a year earlier and about the same percentage as at the end of the 1981/82 season.

U.S. imports of olive oil in calendar year 1983 totaled 33,113 tonnes, up from 29,237 tonnes in 1982. Italy accounted for 57 percent of total 1983 U.S. imports of olive oil, and Spain accounted for 29 percent of the total.

World Production of Olive Oil (Pressed Oil)[2] In Thousands of Metric Tons

Crop Year[2]	Algeria	Greece	Italy	Jordan	Lebanon	Argentina	Morocco	Portugal	Spain	Syria	Tunisia	Turkey	Libya	Israel	World Total
1971-2	23	186	616	1	11	9	68	42	341	22	167	51		1	1,568
1972-3	15	249	340	6	7	28	21	48	440	33	70	154		2	1,422
1973-4	16	192	543	—	8	22	30	42	447	14	130	53		—	1,520
1974-5	8	237	433	7	14	19	26	48	333	44	117	110		—	1,414
1975-6	18	257	633	1	5	17	38	36	455	33	180	96		5	1,788
1976-7	15	224	301	5	12	12	30	36	390	56	85	150		—	1,334
1977-8	5	234	688	2	6	14	15	30	361	38	130	60		4	1,594
1978-9	14	240	419	7	6	15	20	40	500	66	83	160	5	0	1,577
1979-0	10	203	626	1	15	22	39	66	433	42	85	52	4	5	1,599
1980-1	18	321	515	10	2	11	23	32	479	83	145	170	8	2	1,921
1981-2[1]	15	256	470	5	12	14	34	23	300	45	70	60	8	4	1,252
1982-3[3]	16	330	500	9	8	13	35	87	640	88	130	170	7	2	2,196
1983-4[3]						16		50	280						1,311

[1] Preliminary. [2] Total pressed oil in marketing year ending Oct. 31; excludes sulfur oil extracted from residues. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

T.441

Wholesale Price of Olive Oil (Imported, Edible) in Drums at N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	39.3	39.3	39.3	39.3	39.3	39.3	39.3	42.7	42.7	42.7	42.7	42.7	40.7
1972	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7
1973	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	N.A.	54.5	90.0	86.7	51.3
1974	86.7	86.7	86.7	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	92.7	92.7	92.5	89.6
1975	110.7	116.7	116.7	116.7	116.7	116.7	116.7	112.0	116.7	N.A.	N.A.	N.A.	112.7
1976	103.3	103.3	103.3	103.3	103.3	103.3	103.3	103.3	86.7	86.7	86.7	86.7	97.8
1977	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7
1978	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.3	83.3	83.3	83.3	83.3	85.4
1979	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3
1980	62.5	78.1	83.3	83.6	85.6	87.1	85.5	86.3	87.5	86.5	87.5	87.5	83.3
1981	87.0	85.0	81.3	85.6	83.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1982	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1983													

Source: Economic Research Service, U.S.D.A.

T.442

Onions

Salient Statistics of Onions in the United States

Crop Year	Stocks—Jan. 1 (1,000 Cwt.) Common Storage	Cold Storage	Total Stocks	Acres Harvested (Acres)	Yield Per Acre (Cwt.)	Production (1,000 Cwt.)	Price Per Cwt. (Dollars)	Farm Value ($1,000)	Domestic Exports[3] (1,000 Cwt.)	Imports[3] (1,000 Cwt.)	Per Capita[2] Consumption — Farm Weight (Lbs.)	Frozen
1971	5,470	180	5,650	98,800	302	29,803	3.88	105,330	1,269	590	9.8	.34
1972	4,810	170	4,980	94,470	300	28,355	6.48	167,715	1,340	1,458	9.8	.51
1973	3,961	77	4,038	104,990	283	29,689	7.57	207,226	1,773	1,079	9.2	.53
1974	4,754	81	4,835	109,730	302	33,151	4.87	147,182	1,553	909	10.5	.48
1975	5,109	80	5,189	103,080	305	31,418	9.35	266,230	3,169	696	9.5	.58
1976	4,430	89	4,519	109,520	322	35,288	6.93	217,202	3,169	1,403	10.0	.65
1977	5,156	98	5,254	108,550	319	34,583	6.76	204,313	1,941	1,345	10.0	.68
1978	5,680	63	5,743	121,920	297	36,174	7.81	251,495	2,164	1,582	10.3	.71
1979	6,556	66	6,622	123,910	312	38,602	6.98	237,432	1,851	1,304	11.2	.74
1980	7,752	99	7,851	112,960	296	33,476	11.40	346,539	2,614	1,400	9.9	.68
1981[1]	6,235	78	6,313	111,630	314	35,021	14.70	475,395	2,822	1,581	9.4	.70
1982[1]	5,560	35	5,595	125,220	333	41,637	8.25	306,371			9.6	.80
1983[1]				119,440	312	37,246	10.10	343,157				
1984												

[1] Preliminary. [2] Onions and shallots. Includes 0.1 pounds of shallots in each year. [3] Year beginning July. *Source: Economic Research Service, U.S.D.A.*

T.443

Production of Onions in the United States In Thousands of Hundredweight (Cwt.)

Year	Spring: Texas	California	Arizona	Total (All)[2]	Summer: New Mexico	Texas	California	Colorado	Idaho	Michigan	Minnesota	New York	Oregon	Total (All)	Grand Total
1971	3,420	1,508	570	5,498	300	2,875	7,142	1,475	4,281[3]	1,674	240	4,123	[3]	21,430	29,803
1972	2,975	1,881	645	5,501	285	2,846	6,452	1,709	2,184	2,144	252	2,300	3,392	20,008	28,355
1973	3,120	1,512	768	5,400	1,073	1,820	6,384	1,392	2,475	2,046	271	2,992	3,927	24,259	29,689
1974	3,570	1,809	820	6,199	1,122	1,586	8,580	1,479	2,070	2,139	281	3,973	3,576	26,846	33,151
1975	2,975	1,587	686	5,248	1,005	1,404	9,180	1,643	2,025	1,768	165	3,443	3,567	26,170	31,418
1976	4,800	1,652	720	7,172	1,340	1,881	7,215	2,183	2,915	2,166	172	3,631	4,433	28,025	35,288
1977	2,789	1,967	616	5,372	1,040	1,870	8,453	2,040	2,412	2,095	218	4,057	4,287	29,034	34,583
1978	3,345	1,590	738	5,673	1,184	1,502	8,250	2,730	2,470	2,448	223	4,309	4,187	30,263	36,174
1979	3,504	1,904	536	5,944	960	1,520	9,504	2,535	2,295	2,686	125	4,818	4,776	32,658	38,602
1980	3,569	1,683	623	5,875	1,131	1,764	6,000	2,460	2,453	1,800	201	4,433	4,538	27,601	33,476
1981	2,700	2,160	512	5,372	1,242	1,488	7,025	2,925	2,625	2,446	199	3,933	4,460	29,649	35,021
1982	3,492	2,805	876	7,173	1,643	1,544	10,395	3,255	2,475	2,336	168	4,550	4,821	34,464	41,637
1983[1]	3,800	2,166	656	6,622	1,248	1,643	9,042	2,720	2,350	2,294	158	2,793	5,050	30,624	37,246
1984[1]	3,162														
1985															

[1] Preliminary. [2] Total "Spring" after 1971. Before, add "Texas" for total Spring. [3] Includes "E. Oregon." *Source: Crop Reporting Board, U.S.D.A.*

T.444

Cold Storage Stocks of Fresh Onions in the United States In Thousands of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1971	18,018	19,340	15,053	7,685	2,359	862	1,436	680	553	3,368	10,638	11,729
1972	17,032	16,135	13,526	8,924	1,961	1,339	416	421	666	3,118	6,848	8,911
1973	7,685	8,326	6,003	3,797	359	740	403	690	781	1,798	6,534	8,446
1974	8,061	9,510	6,617	2,952	635	870	521	315	323	3,378	6,296	8,572
1975	8,142	6,807	3,937	3,291	1,865	1,884	538	277	290	3,456	7,214	9,122
1976	8,886	7,632	5,569	2,087	2,005	2,172	4,187	2,271	2,332	837	4,563	8,586
1977	9,829	8,611	8,824	5,034	905	603	537	44	884	2,766	3,922	7,285
1978	6,336	3,981	1,744	1,360	1,127	954	538	2,159	2,607	1,535	3,656	5,201
1979	6,584	6,023	5,400	2,967	2,107	1,254	844	800	253	1,747	1,487	4,298
1980	9,913	8,446	6,430	4,070	1,124	442	1,967	954	1,298	2,089	2,265	4,901
1981	7,777	6,972	4,422	3,730	1,247	591	1,828	649	143	719	665	3,219
1982	3,474	3,963	3,319	1,813	—	—	275	—	—	952	—	—
1983[1]	4,183	4,407	4,116	2,988	1,042	235	325	724	385	785	1,348	8,826
1984[1]	8,648	7,006	2,527	343	1,230							
1985												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.445

World Production of Onions In Thousands of Metric Tons

Year	Brazil	Egypt	India	Italy	Japan	South Korea	Mexico	Nether-lands	Poland	Ro-mania	Spain	Turkey	Yugo-slavia	United States	USSR	World Total
1976	430	652	2,206	496	1,123	131	280	355	332	321	860	760	322	1,597	1,135	14,059
1977	489	723	2,164	518	1,120	159	306	590	367	358	1,195	845	375	1,561	1,016	15,336
1978	462	599	2,250	520	1,114	165	332	522	431	400	930	880	343	1,630	1,400	15,624
1979	691	560	2,100	487	1,254	393	343	457	334	380	930	1,000	293	1,462	1,400	15,732
1980[1]	685	580	2,400	478	1,112	275	315	413	350	370	921	1,100	280	1,329	1,200	15,278
1981																

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.446

Average Wholesale Price of Onions at Chicago[1] In Dollars Per Hundred Pounds (Cwt)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	4.29	4.94	6.54	7.11	5.26	5.97	6.50	7.24	5.35	6.06	5.75	5.51	5.88
1972	6.16	6.20	5.10	5.69	6.75	8.58	12.03	11.88	9.33	7.31	9.50	8.38	8.08
1973	9.69	11.31	19.75	33.00	21.33	11.50	11.20	9.19	3.30	3.92	4.33	4.31	11.90
1974	5.03	6.05	4.16	3.79	4.03	7.81	8.63	9.83	9.19	7.80	7.04	5.97	6.61
1975	5.46	4.85	9.16	16.13	14.75	15.63	27.83	20.08	13.00	10.80	10.69	14.43	13.57
1976	15.05	11.50	9.21	12.17	13.20	12.50	8.75	8.67	8.14	7.92	7.38	8.71	10.27
1977	11.00	16.46	21.75	23.70	17.67	12.67	12.50	13.00	8.65	8.13	8.08	8.13	13.48
1978	7.47	7.44	13.08	17.25	9.67	12.92	14.56	14.25	10.50	9.58	9.56	10.56	11.40
1979	9.44	15.08	11.75	10.25	12.50	19.50	20.65	14.05	11.10	9.31	8.54	7.15	12.44
1980	7.75	7.04	6.75	9.00	20.00	20.50	14.63	13.50	13.50	12.67	11.25	14.70	12.61
1981	18.17	20.00	25.75	30.00	28.50	32.00	22.17	22.50	24.00	14.21	17.20	16.92	22.62
1982	21.44	19.79	16.88	17.00	18.25	17.92	13.25	16.00	11.25	10.00	9.50	8.29	14.96
1983	7.21	8.83	10.18	17.25	13.00	10.18	13.63	16.33	13.50	13.63	15.30	19.92	13.25
1984	20.00	24.20											
1985													

[1] All yellow, all varieties, fair to good quality, U.S. No. 1, all sizes and field run, track and street sales. *Source: Bureau of Labor Statistics* (0113–0216) T.447

Average Price Received by Farmers for Onions in the U.S. In Dollars Per Cwt.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season Average
1971	3.40	3.14	3.52	3.73	3.79	4.18	4.43	4.87	4.39	4.66	4.27	4.65	3.88
1972	4.64	4.08	3.85	4.49	5.48	6.62	8.21	8.17	6.91	6.33	6.53	6.91	6.48
1973	9.43	11.90	17.50	23.70	13.00	8.51	7.39	6.23	5.57	5.97	6.97	7.23	7.57
1974	10.40	10.50	6.30	4.85	4.79	5.24	6.07	7.11	6.34	5.39	4.57	4.27	4.87
1975	3.90	4.61	7.59	12.30	10.60	12.70	17.70	14.20	11.70	9.72	9.80	11.50	9.35
1976	11.10	8.85	6.95	7.20	6.17	5.49	5.65	5.38	5.73	5.34	5.51	6.97	6.93
1977	11.50	14.00	19.40	19.40	10.40	9.00	8.57	6.88	6.40	6.49	6.39	5.50	6.76
1978	4.95	4.76	7.79	12.10	7.50	7.64	9.85	9.14	7.13	6.44	7.05	9.53	7.81
1979	11.00	12.20	9.57	9.70	8.10	11.40	13.30	9.74	7.93	6.45	6.27	5.57	6.98
1980	4.50	4.20	5.30	6.83	9.86	10.70	9.20	10.40	11.30	10.90	11.50	14.20	11.40
1981	15.40	17.20	23.50	25.40	23.00	18.10	17.70	15.40	11.50	12.80	14.80	14.60	17.45
1982	18.40	18.10	13.40	12.40	13.10	9.43	11.90	12.60	7.83	7.12	6.90	6.35	11.46
1983[1]	5.29	6.44	9.15	11.60	10.50	8.68	9.76	10.90	11.60	11.60	13.70	18.80	10.67
1984[1]	19.40	19.60	25.60	29.90									
1985													

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.448

Oranges and Orange Juice

The 1982/83 (December/November) season Florida crop of all oranges excluding Temples totaled 139.5 million boxes averaging 90 pounds of oranges each. This crop was 11 percent above the 1981/82 harvest of 125.8 million which was affected by freeze damage. Florida produced 70.2 million boxes of early, midseason, and Navel varieties in 1982/83 compared to 74.0 million the previous season. The Florida Valencia production amounted to 69.3 million boxes compared with 51.8 million during 1981/82.

The total pack of FCOJ in Florida during the 1982/83 season was 169.6 million gallons up 27 percent from 133.3 million in 1981/82. The final 1982/83 Florida FCOJ yield per box was 1.48 gallons at 42.0 degree brix versus 1.28 gallons in 1981/82.

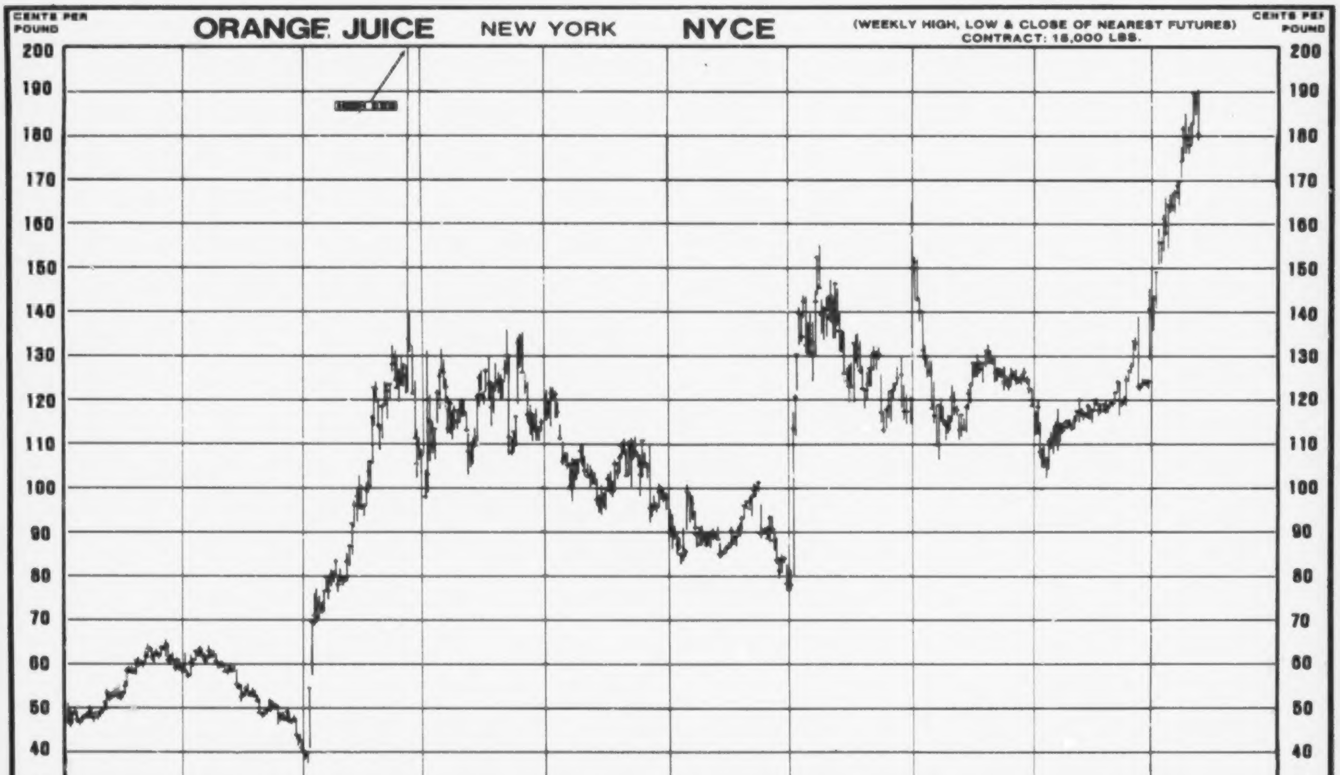
Foreign imports of FCOJ into Florida ports during 1982/83 were 48.7 million gallons compared with 1981/82 imports of nearly 70.3 million gallons figured on a 42 degree brix basis. Most of the foreign shipments of FCOJ into the U.S. originate in Brazil. The International Trade Commission (ITC) ruled that subsidized Brazilian exports were detrimental to the U.S. industry. The Brazilian Government agreed to a 3.51 percent ad valorem tax as a substitute for a U.S. countervailing duty previously imposed after the Department of Commerce investigation. This tax remained in early 1984, pending a court decision by the United States Court of International Trade which had petitioned to overrule the ITC.

Total movement of FCOJ 42 degrees brix, during 1982/83 amounted to 238.9 million gallons compared with 230.3 million in the 1981/82 season. Because the movement did not show any significant strength, f.o.b. prices for FCOJ had remained steady at $3.95 a dozen 6-ounce cans, the same as a year earlier. Nevertheless, stocks on hand were substantially lower at the end of the 1982/83 season.

On Dec. 25–26, 1983 the Florida citrus belt was hit by a freeze for the third time in four seasons. Because of the severity of damage, the total U.S. 1983/84 orange crop was forecast in March 1984 at 177.6 million boxes of which the Florida share was estimated at 121.2 million boxes (including Temples), compared to the pre-freeze estimate of 172.5 million. Florida packers expected a juice yield of 1.25 gallons per box 42 degree brix compared to 1.43 gallons prior to the freeze. The reduced crop and lower juice yield will result in a sharply smaller FCOJ pack than last season and combined with reduced carry-in stocks, the total supply will be tight for 1983/84. This prospect was reflected in record-high wholesale FCOJ prices of $5.04 per dozen 6-oz. cans, an advancing Brazilian minimum export price of $1,450 per metric ton for 65° brix FCOJ, and sharply higher U.S. futures prices.

Futures Market

Frozen concentrated orange juice (FCOJ) futures are traded on the Citrus Associates of the New York Cotton Exchange.



World Production of Oranges (Including Tangarines) In Thousands of Metric Tons

Season	Algeria	Argentina	Brazil	Australia	Greece	Israel	Italy	Japan	Mexico	Morocco	Spain	Turkey	South Africa	United States	World Total
1972–3	515	1,032	2,872	338	400	1,221	1,604	4,070	1,270	988	2,642	563	534	9,245	28,932
1973–4	520	1,063	3,782	369	422	1,233	1,891	3,864	1,089	819	2,460	554	545	8,931	29,333
1974–5	480	1,014	4,065	438	539	1,016	2,098	3,952	1,110	583	2,479	622	499	9,913	30,660
1975–6	480	958	4,065	389	567	995	1,931	4,234	905	552	2,643	645	564	10,170	30,918
1976–7	506	990	3,754	391	533	968	2,258	3,575	1,283	784	2,489	671	463	10,144	30,567
1977–8	508	990	4,321	352	455	949	1,950	4,120	750	1,070	1,914	785	600	9,268	28,479
1978–9		925	6,471	451	506	992	1,959	3,637	1,398	827	2,526	806	600	8,310	24,050
1979–0		921	9,282	448	360	943	2,104	3,945	1,810	1,024	2,597	835	565	10,734	38,502
1980–1		905	9,872	381	561	812	2,057	3,229	1,720	965	2,605	862	569	9,514	36,725
1981–2[1]		820	10,853	414	745	1,123	2,131	3,150	1,820	988	2,468	850	577	6,895	35,446
1982–3[2]					691	977	1,800	3,242	1,600	999	2,405	860		8,631	

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.449

U.S. Salient Statistics of Oranges & Orange Juice

	Production[2] Million Boxes							Frozen Concentrated Orange Juice—Florida in Million Gallons				Florida Crop Processed Million Boxes					
Season	Arizona	California	Florida	Texas	Total	Farm Price $ Per Box	Farm Value Million $	Carry-in	Pack	Total Supply	Total Season Movem.	Frozen Concentrates	Chilled Pdt's Juice	Chilled Pdt's Sections & Salads	Other Processed	Total Processed	Yield Per Box (Gall.)
1973–4	3.4	40.4	165.8	6.6	216.2	2.78	600.7					132.5	20.4	.6	7.5	161.0	1.30
1974–5	5.0	55.1	173.3	4.5	237.8	2.75	653.8					135.5	22.8	.5	7.6	166.4	1.31
1975–6	2.7	52.8	181.2	6.1	242.8	2.80	678.7	34.6	174.8	191.6	173.6	144.5	24.0	.6	7.6	176.7	1.29
1976–7	4.0	45.3	186.8	6.9	243.0	3.34	811.2	29.7	178.7	196.2	180.9	148.7	27.3	.4	8.8	185.2	1.07
1977–8	2.6	42.6	167.8	6.1	220.1	5.45	1,198.7	29.1	185.0	200.8	185.1	132.2	25.3	.4	8.1	166.0	1.23
1978–9	2.9	37.3	164.0	6.4	210.6	6.15	1,296.0	33.5	206.2	221.9	206.1	130.2	22.8	.3	6.5	159.8	1.34
1979–0	3.5	59.4	206.7	4.0	273.6	4.76	1,304.2	37.4	256.4	293.8	239.0	174.9	24.4	.3	7.0	206.6	1.34
1980–1	2.6	65.3	172.4	4.3	244.6	4.85	1,327.7	57.3	249.6	306.9	240.6	145.3	19.6	.2	6.4	171.5	1.21
1981–2	3.1	41.9	125.8	5.9	176.7	5.30	1,295.3	69.0	214.9	283.9	230.3	105.1	16.3	.2	4.5	126.1	1.28
1982–3[1]	3.8	76.1	139.5	5.7	225.1	6.61	1,167.8	53.4	228.4	281.8	238.9	114.6	18.1	.2	2.7	135.5	1.48
1983–4[1]	2.5	53.0	118.7	2.2	176.4	6.56	1,457.0	42.9									1.25

[1] Preliminary. [2] Fruit ripened on trees, but destroyed prior to picking is not included. *Source: Economic Research Service, U.S.D.A. Florida Citrus Processors Assoc.* T.450

U.S. Cold Storage Stocks of Orange Juice Concentrate[2] In Millions of Pounds (Gallon Equivalent)

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1973	353.5	468.5	633.7	768.8	830.6	909.5	1,074.6	1,089.1	999.1	829.8	709.6	598.1
1974	641.9	779.1	935.9	1,025.9	1,121.4	1,239.9	1,319.7	1,228.9	1,031.7	917.8	737.4	616.9
1975	654.6	802.1	967.3	985.4	1,032.1	1,246.8	1,294.0	1,153.4	981.7	856.6	696.7	633.2
1976	756.6	943.0	1,046.9	1,016.1	1,075.8	1,203.7	1,339.9	1,229.1	1,075.4	877.1	740.3	605.2
1977	613.6	681.4	845.5	932.8	955.5	1,040.6	914.3	806.5	647.1	551.7	456.3	333.3
1978	392.8	511.5	617.1	617.3	744.4	854.7	883.1	811.6	720.2	549.6	485.4	359.8
1979	506.5	762.3	996.6	995.0	1,044.4	1,186.5	1,228.4	1,116.4	926.2	704.6	560.1	466.6
1980	559.0	827.2	1,062.5	1,124.8	1,221.4	1,429.7	1,500.3	1,369.3	1,182.4	963.7	842.7	679.5
1981	722.4	907.1	1,053.2	1,180.1	1,264.4	1,502.2	1,491.3	1,307.8	1,178.8	1,022.2	892.2	759.1
1982	753.1	957.0	1,172.3	1,300.7	—	—	1,406.2	—	—	846.5	—	—
1983[1]	835.9	1,028.1	1,016.2	963.3	1,187.0	1,408.0	1,318.6	1,192.4	960.8	810.7	648.8	595.0
1984[1]	631.1	785.7	956.3	976.3	947.7							

[1] Preliminary. [2] Adjusted to 42° BRIX basis (9.896 lbs./gal.) beg. 1/1/81; prev. 43.4°. *Source: Crop Reporting Board, U.S.D.A.* T.451

Month-End Open Interest of Frozen Concentrated Orange Juice Futures In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	8,973	10,002	10,611	11,980	12,381	12,878	11,964	13,950	12,781	12,878	9,212	9,073
1979	7,916	8,503	6,734	7,887	7,223	8,261	8,058	8,116	6,510	7,101	8,423	10,428
1980	7,612	6,501	6,126	6,390	6,210	5,923	6,186	6,920	8,046	9,063	9,239	9,582
1981	7,980	10,787	12,018	11,354	11,667	11,925	10,675	9,751	9,454	7,991	7,654	8,037
1982	9,519	8,634	6,580	6,238	6,227	5,808	6,007	6,395	5,666	5,775	7,106	9,359
1983	9,720	7,136	6,229	6,267	6,225	6,264	5,969	6,413	6,487	6,155	5,732	7,186
1984	8,873	10,650	11,676	11,733								

Source: Citrus Assoc. of the N.Y. Cotton Exch. T.456

ORANGES AND ORANGE JUICE

High, Low & Closing Prices of May Orange Juice[1] Futures at New York In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1979	High	98.65	89.75	88.40	92.75	95.70	95.75	100.65	129.00	128.80	121.80	127.55	124.60	109.80	110.00	106.10	129.00
	Low	85.25	86.10	80.15	84.50	88.90	91.50	95.25	95.70	115.00	115.00	118.60	106.40	100.10	102.30	100.00	80.15
	Close	89.30	86.60	84.25	89.00	91.90	95.60	96.20	129.00	116.25	120.80	121.70	107.25	106.25	106.20	101.35	—
1980	High	104.60	104.00	102.00	101.50	102.00	109.80	109.90	111.25	100.00	102.00	100.00	91.00	101.20	91.50	89.20	111.25
	Low	94.50	96.75	97.90	92.70	95.00	102.00	101.60	97.50	95.10	97.25	87.00	83.70	88.00	86.70	86.50	83.70
	Close	98.90	100.75	101.30	95.80	102.00	108.70	109.50	98.70	98.50	97.90	89.65	86.15	88.70	88.80	87.55	—
1981	High	107.80	94.75	95.50	96.90	94.55	97.50	103.00	104.45	96.15	92.20	133.50	149.50	150.20	155.10	143.50	155.10
	Low	91.35	91.50	92.80	90.60	91.10	93.45	96.80	92.45	90.25	83.30	84.00	135.25	126.80	133.70	138.00	83.30
	Close	91.35	93.00	94.40	91.10	93.20	97.50	102.20	95.00	91.80	85.00	133.35	138.40	150.20	139.60	138.35	—
1982	High	149.50	151.50	150.95	149.40	144.75	145.90	140.00	139.50	129.30	133.50	156.90	146.40	133.00	120.50	120.00	156.90
	Low	136.00	140.25	144.80	138.75	134.00	134.00	134.25	126.00	122.30	119.00	119.50	129.00	106.75	110.90	113.50	94.00
	Close	146.45	148.45	150.70	138.75	142.90	137.25	136.95	126.10	127.70	122.55	146.20	130.30	115.10	113.30	117.70	—
1983	High	142.85	130.20	132.00	130.00	130.20	133.50	133.25	130.30	128.60	129.05	122.00	112.80	114.75	115.50	120.50	163.75
	Low	122.00	121.95	126.05	123.80	126.50	127.60	129.00	125.55	126.00	121.25	105.70	103.10	107.30	113.10	113.60	103.10
	Close	127.50	126.50	127.75	130.00	128.25	133.50	129.50	126.90	127.00	121.85	107.70	110.35	114.70	113.70	119.70	—
1984	High	106.90	104.95	104.30	108.50	110.00	111.30	114.25	121.00	122.50	149.00	159.50	167.20	177.40	186.40		
	Low	104.00	100.50	101.40	103.30	106.90	109.20	110.85	109.00	119.70	121.10	141.00	155.00	160.00	174.10		
	Close	104.80	102.05	103.70	106.60	108.80	110.95	112.45	120.50	121.75	146.00	156.75	163.00	174.20	186.15		
1985	High	170.00	176.00														
	Low	155.00	166.50														
	Close	165.60	176.00														

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[1] Frozen concentrated orange juice. *Source: Citrus Associates of the N.Y. Cotton Exch., Inc.*

T.455

Volume of Trading of Frozen Concentrated Orange Juice Futures In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	32,409	25,867	29,847	16,858	23,331	26,682	23,252	20,257	25,430	28,087	20,121	12,264	284,405
1979	25,080	17,387	15,162	11,378	11,661	15,526	14,326	16,014	15,010	15,141	12,889	15,239	184,813
1980	21,982	13,010	22,555	9,337	6,742	7,914	8,308	9,715	11,800	16,276	13,042	22,183	162,864
1981	35,041	32,755	49,107	39,785	32,611	35,459	32,944	29,979	22,927	25,435	19,747	31,392	387,182
1982	28,968	25,524	27,139	17,038	12,206	21,501	14,577	14,242	8,424	9,606	8,647	19,188	207,070
1983	28,122	20,345	11,754	6,704	7,614	7,823	4,881	4,531	5,588	8,690	6,409	10,773	124,267
1984	33,189	36,206	34,653	32,774									

Source: Citrus Assoc. of the N.Y. Cotton Exch.

T.452

Wholesale Index Price of Frozen Orange Concentrate[1] 1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	2.040	2.776	2.752	2.752	2.752	2.910	2.910	3.101	3.223	3.223	3.459	3.508	2.951
1978	3.508	3.508	3.514	3.514	3.514	3.514	3.514	3.514	3.514	3.514	3.649	3.787	3.547
1979[2]	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2
1980	260.2	260.2	260.2	254.3	254.3	249.2	249.2	249.2	249.2	249.2	236.5	236.5	250.7
1981	241.1	280.2	312.2	338.1	338.1	338.1	338.1	338.1	335.5	334.0	323.4	313.1	319.2
1982	312.9	337.7	334.5	326.5	315.4	308.4	308.7	307.1	307.8	307.7	307.5	303.2	315.5
1983	304.0	300.8	299.6	299.1	302.3	300.7	301.1	300.8	302.4	302.5	303.8	303.8	301.7
1984	314.9	356.5											

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[1] Packer to wholesale distributor, or retail chain store, f.o.b. plant. [2] Prior to 1979 prices are in $ per dozen 6 oz. cans. *Source: Bureau of Labor Statistics* (0242–0301.99)

T.454

Wholesale Price of Oranges (California) F.O.B. Packed Fresh In Dollars Per Box

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	7.00	7.50	7.28	7.38	7.11	7.88	7.70	8.78	9.10	9.70	12.70	11.30	8.62
1978	11.90	11.20	10.54	9.37	9.97	10.10	10.70	13.40	14.50	14.30	13.50	13.50	11.91
1979	13.50	12.29	13.68	13.19	13.58	15.98	13.50	12.40	12.40	11.00	11.60	10.70	12.82
1980	9.72	9.72	10.60	9.54	9.21	9.39	9.52	9.52	9.50	9.54	13.40	11.60	10.11
1981	11.00	10.90	10.20	9.78	10.00	12.10	14.10	12.80	12.60	11.70	11.50	12.70	11.62
1982	13.50	13.80	13.50	14.20	17.20	17.50	18.70	20.30	28.30	28.40	16.50	12.80	17.89
1983	10.80	10.50	10.50	10.30	9.96	10.60	12.90	14.10	9.90	8.96	11.95	12.90	11.11
1984	12.80	12.10											

Source: Economic Research Service, U.S.D.A.

T.453

Palm Oil

World palm oil production in the 1983/84 season was estimated by the USDA in March 1984 at 6.48 million metric tons, up 16 percent from 1982/83 estimated production of 5.59 million tonnes. The expected increase in production is influenced in part by the introduction of the Cameroon Weevil into Indonesia with the intention of stimulating palm tree pollination, and more favorable weather and the anticipating recovery from weevil stress in Malaysia.

World stocks of palm oil at the start of the 1983/84 season were sharply below the year-earlier level, at an estimated 424 thousand tonnes versus the exceptionally high level of 875 thousand tonnes at the start of the 1982/83 season. However, because of the projected increase in production, total world supply of palm oil for the 1983/84 season was estimated at 6.91 million tonnes, nearly 7 percent above 1982/83 supplies.

Exports of palm oil in the 1983/84 season were expected to increase some 3 percent from the 1982/83 total of 3.96 million tonnes, to 4.10 million. The expected increase in exports would probably be larger had it not been for very high prices for palm oil relative to other edible oils in the world market. World exports of palm oil exceed all other edible oils, including soybean oil.

The use of palm oil worldwide in 1983/84 was expected by the USDA to total about 6.26 million tonnes, up from 6.044 million in 1982/83. However, estimated total world use of palm oil is slightly less than one-half as large as soybean oil use.

Ending 1983/84 world stocks of palm oil were expected by the USDA to total 652 thousand tonnes, up nearly 54 percent from the relatively low 1982/83 world ending stocks of 424 million tonnes. Projected 1983/84 ending stocks of palm oil represented 9.4 percent of estimated use versus 6.6 percent at the end of the 1982/83 season.

World Palm Oil Statistics In Thousand Metric Tons

	Production									Exports							
Year	Malaysia	Colombia	China	Indonesia	Ivory Coast	Sabah	Zaire	Nigeria	World Total	Malaysia	Indonesia	Ivory Coast	Sabah	Singapore	Zaire	Papua N. Guin.	World Total
1977	1,613	52	81	497	135	129	150	510	3,476	1,427	421	79	124	277	21	27	2,393
1978	1,786	51	87	525	150	146	137	515	3,713	1,514	412	82	144	299	10	28	2,481
1979	2,189	70	93	641	124	155	98	500	4,267	1,901	351	49	155	492	—	35	2,935
1980	2,576	75	100	702	182	180	93	520	4,829	2,260	503	80		679	10	33	3,723
1981	2,824	80	106	752	147	203	170	520	5,170	2,469	196	63		423	5	44	3,416
1982[1]	3,512	87	112	838	160	—	165	525	6,009	2,829	240	68		502	5	48	3,968
1983[1]	3,018	104	115	875	162			530	5,594	2,894	280	58		420		58	3,923
1984[2]	3,800	110	110	950	154			535	6,467	3,055	300	54		395		54	4,087

[1] Preliminary. [2] Projected. *Source: Economic Research Service, U.S.D.A.* T.457

Palm Oil—U.S. Supply & Distribution In Millions of Pounds

	Supply			Utilization								Prices		
				Food Uses										
Year Begin. Oct.	Imports	Stocks Oct. 1	Total Supply	Shortening	Margarine	Salad or Cooking Oil	Other	Total	Non-Food Uses	Total Disappearance	Exports (& Shipments)	Value of Imports[2] ¢ Per Pound	U.S. Ports C.I.F.	Rott.[3] U.S. $ Metric Ton
1975–6	933	127	1,060	699	52	77	11	839	44	883	39	16.2	18.1	
1976–7	661	138	813	430	48	91	11	580	30	610	58	19.8	23.8	
1977–8[1]	361	131	492	253	23	50	19	346	21	367	51		26.4	564
1978–9[1]	277	74	351							265	12			652
1979–0[1]	212	74	280							223	21			597
1980–1[1]	324	42	242	188						299	9			589
1981–2[1]	218	58	276	193						218	10			479
1982–3[1]	282	47	329	206						256	22			424
1983–4[1]	440	69	509							441				770

[1] Preliminary. [2] F.O.B. importing countries. [3] CIF Rotterdam—Sumatra/Malaysia, CIF NW Europe. *Source: Economic Research Service, U.S.D.A.* T.458

Average Wholesale Palm Oil Prices, CIF, Bulk, U.S. Ports In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	20.5	23.0	27.1	25.5	29.5	29.6	25.0	23.3	21.6	20.2	20.4	23.9	24.3
1978	23.1	25.2	27.4	28.0	28.4	30.6	31.2	28.5	29.8	30.5	30.4	31.0	28.7
1979	31.7	32.8	31.1	31.2	31.5	32.1	33.6	31.5	30.3	29.1	29.1	30.1	31.2
1980	32.0	32.4	31.8	29.6	27.8	28.1	27.6	26.5	25.5	22.3	27.1	26.9	28.1
1981	27.5	28.3	25.5	27.5	27.6	N.A.	N.A.	25.0	24.7	N.A.	N.A.	N.A.	27.1
1982	N.A.	N.A.	24.0	23.7	24.4	22.3	18.9	18.6	19.3	18.0	19.0	20.0	20.8
1983	19.5	19.0	18.8	19.8	20.7	19.5	20.6	26.2	30.6	31.1	32.0	37.5	24.6
1984													

Source: Economic Research Service, U.S.D.A. T.459

Paper

The sluggishness of the 1983 economic recovery in some parts of the world dampened the expected rebound of demand for products from U.S. pulp mills during the year. However, 1983 shipments from pulp mills, expressed in constant dollars, climbed an estimated 5.6 percent above the depressed 1982 level. Worldwide inventories of pulp held by producers showed a sharply declining trend during 1983. The greatest proportion of the 1983 recovery in the pulp industry was due to improved demand in the domestic market.

Production of paper and board in 1983 was estimated to have rebounded to 66.0 million tons, up 7.3 percent over the low 1983 figure. Operating inventory levels rose in most downstream industries along with demand stemming from the strong surge in GNP. Capacity utilization rates increased rapidly in the first half of 1983 when real growth in GNP rose faster than for any period in the past 5 years.

Available data suggested that imports of paper and board rose only slightly in 1983, but this early trend may have been deceptive, given that 1982 data were inflated by heavy imports of newsprint early in the year. Imports would normally have been expected to remain at lower levels throughout 1983 because of new capacity in the U.S. industry, but the widened differential between the Canadian and U.S. dollars and demand for special types of paper may have attracted additional imports.

Foreign demand for primary paper and board products recovered slowly in 1983 as the strong U.S. dollar continued to hamper U.S. exports, particularly in markets where U.S. traders competed with the improving Nordic paper industries. As the Nordic suppliers concentrated on capturing greater market shares in Western European countries, U.S. suppliers sought to fill supply voids elsewhere in the world. As a result, exports climbed by 6.0 percent to an estimated $1.9 billion, which approached the 1981 level. In an effort to protect its own industry, the EC mandated that the price of imported linerboard, the principal U.S. paper trade commodity, be raised by more than 20 percent in March 1983. At that time, the EC determined that "dumping" was taking place at the transaction price levels offered by competing supplier countries.

Shipments by the paper and board industry in 1984 are expected to climb by 5.3 percent to $14.8 billion, expressed in 1972 dollars. The strength in the domestic market witnessed in the last half of 1983 was expected to bring about price increases during 1984.

Shipments of (Paper Products) Shipping Containers[1] In Millions of Square Feet Surface Area

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	14,415	14,223	16,261	16,001	14,916	17,192	15,470	16,412	17,144	17,280	16,653	15,866	191,832
1972	15,453	16,302	18,358	16,579	17,676	18,939	15,427	15,858	21,482	19,721	18,643	17,158	211,926
1973	18,037	17,591	20,426	18,526	20,074	19,702	16,818	19,914	18,720	21,775	19,450	17,016	228,052
1974	19,784	18,480	19,729	19,658	19,842	17,979	17,826	18,807	17,169	18,592	15,576	12,630	216,072
1975	14,689	13,768	14,742	14,541	16,151	15,612	16,023	17,006	18,580	20,053	16,017	16,145	194,329
1976	17,509	16,836	19,208	18,058	17,888	19,040	17,176	18,495	18,651	18,741	17,980	16,789	216,371
1977	17,156	17,086	20,607	18,498	19,467	20,139	16,997	20,372	19,674	19,923	19,343	17,936	227,198
1978	18,075	18,711	21,804	19,482	21,772	22,060	17,601	22,301	20,531	22,608	20,354	18,599	243,898
1979	20,929	19,464	22,868	20,585	21,723	20,960	19,672	22,119	20,325	23,562	20,327	18,109	250,643
1980	21,993	20,452	21,466	20,559	18,909	19,115	18,337	19,208	20,873	23,032	18,668	19,259	241,377
1981	21,136	19,916	21,656	21,590	19,938	21,151	20,710	20,801	21,257	22,058	18,317	17,587	246,152
1982	18,896	18,706	21,147	19,957	18,777	20,071	18,610	20,414	20,657	21,604	19,043	17,646	235,185
1983[2]	19,980	18,715	21,891	20,466	20,777	22,044	19,582	22,649	22,317	23,476	21,043	19,874	252,814
1984													

[1] Corrugated & solid fiber. [2] Preliminary. Source: *National Paperboard Association* T.463

Index Price of Coated Printing Paper, No. 3 Dec. 1973 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	134.7	135.8	136.3	137.9	137.7	137.5	139.3	138.9	139.4	143.7	143.8	144.0	139.1
1978	146.1	146.3	150.0	151.7	152.5	153.8	153.8	154.9	156.3	159.7	161.2	160.6	153.9
1979	161.7	163.2	163.7	165.4	166.5	167.1	167.1	167.7	168.1	171.8	171.8	171.7	167.2
1980	170.8	175.0	176.8	178.9	178.9	178.9	179.0	179.6	179.8	179.9	182.3	183.3	178.6
1981	183.5	185.7	186.8	189.3	191.4	191.4	191.4	189.6	198.1	202.0	202.4	204.6	193.0
1982	203.8	204.9	203.8	202.7	202.7	202.7	201.4	200.0	203.3	203.0	203.5	203.5	203.0
1983	203.5	203.6	203.5	204.2	204.2	204.3	204.3	203.7	203.7	210.9	211.7	211.7	205.8
1984	212.9	220.3											

Source: *Bureau of Labor Statistics* (0913–0113.99) T.470

Salient Statistics of Newsprint in the United States and Canada In Thousands of Metric[3] Tons

	United States													Canada		
			Imports[4] By Countries of Origin									Stocks, Dec. 31				
Year	Production	Exports	Canada	Finland	Italy	Norway	Sweden	U.K.	Others	Total	Consumption	At Mills	At Publishers[2]	Production	Exports	Stocks At Mills
1973	3,738	107	6,855	381	—	—	—	—	0	7,236	10,794	24	603	9,140	8,340	193
1974	3,561	103	6,949	213	—	—	—	—	—	7,162	10,284	23	827	9,548	9,075	143
1975	3,691	123	5,488	33	—	—	—	—	—	5,521	9,254	21	734	7,679	6,863	95
1976	3,736	95	6,251	57	—	—	—	—	—	6,308	9,611	29	921	8,915	7,827	299
1977[3]	3,512	117	5,751	0	—	—	—	—	—	5,751	9,279	31	722	8,154	7,345	282
1978	3,418	75	6,428	0	—	—	—	—	—	6,428	9,864	20	660	8,811	7,974	184
1979	3,685	65	6,372	—	—	—	35	—	97	6,504	10,197	16	628	8,756	7,809	162
1980	4,239	159	7,127	8	9	15	54	37	13	7,279	10,089	21	732	8,625	7,642	165
1981	4,753	283	6,936	4	0	12	23	—	2	6,977	10,165	38	961	8,946	7,870	194
1982	4,574	275	6,485	11	0	19	0	0	16	6,531	10,107	86	854	8,109	7,120	250
1983[1]	4,687	265	6,845	17		33	21			6,919	10,587	99	798	8,486	7,469	301

[1] Preliminary. [2] Reporting only to A.N.P.A.; group represents about 75%. [3] Data prior to 1977 are in THOUSANDS OF SHORT TONS. [4] Data for imports are in thousands of short tons. *Source: Newsprint Service Bureau, A.P.I.* T.464

Average Price of Newsprint Rolls Index: 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	181.8	181.8	181.8	184.7	184.7	184.7	184.7	184.7	184.7	184.7	184.7	184.7	184.0
1976	184.7	184.7	190.1	193.1	197.9	197.9	202.7	203.3	205.3	205.3	205.3	207.6	198.2
1977	209.4	209.4	216.7	216.7	216.7	216.7	216.7	216.7	216.7	216.7	216.7	216.7	215.4
1978	216.7	216.7	216.7	228.2	228.2	228.2	228.2	230.5	230.5	230.5	230.5	230.5	226.3
1979	230.5	238.9	241.7	244.7	247.7	247.7	247.7	247.7	247.7	262.1	265.1	268.2	249.4
1980	269.4	269.4	269.4	269.4	277.6	283.7	283.7	N.A.	283.8	283.8	283.8	298.3	279.3
1981	301.9	301.9	301.9	301.9	301.9	N.A.	301.9	309.3	316.8	316.8	316.8	316.8	308.0
1982	316.8	318.1	318.1	330.0	324.0	319.4	318.4	318.4	318.4	318.4	229.8	299.8	315.8
1983	299.1	299.1	299.1	299.1	299.1	299.1	295.0	305.8	310.4	310.4	309.6	309.6	297.1
1984	309.6	309.6											

[1] Standard rolls, contract, delivered to principal ports. *Source: Bureau of Labor Statistics* (0913–0291.99) T.468

Average Price of Wood Pulp, Bleached Sulphate Softwood In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	364.13	364.13	364.13	364.13	364.13	358.11	364.13	364.13	364.13	364.13	364.13	366.50	363.83
1976	366.50	366.50	366.50	366.50	366.50	366.50	367.13	365.06	365.06	365.06	365.06	365.06	365.95
1977	360.93	364.64	364.64	364.64	368.54	368.54	368.54	368.54	357.57	354.75	N.A.	N.A.	364.13
1978	350.76	341.15	341.15	330.52	327.66	327.66	306.73	306.73	306.73	339.91	336.97	336.97	329.41
1979	345.85	346.91	358.68	363.48	363.48	373.36	377.45	383.87	383.87	413.59	413.59	413.59	377.89
1980	440.95	440.95	440.95	473.35	473.35	473.35	476.97	476.97	476.97	476.97	476.97	476.97	467.05
1981	476.97	476.97	476.97	487.64	487.54	487.54	487.54	487.54	487.54	488.07	506.75	506.75	488.15
1982	408.1	406.9	406.9	392.4	386.6	383.8	362.0	357.9	354.4	347.9	347.2	346.9	375.0
1983	333.7	330.7	322.3	319.2	321.4	323.2	328.5	331.4	333.3	343.4	352.5	350.0	332.4
1984	353.7	379.7											

Source: Bureau of Labor Statistics (0911–0211.09) T.469

Index Price of Shipping Sack Paper[1] Dec. 1973 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	147.5	147.5	147.5	157.0	158.7	158.1	158.1	158.1	158.1	158.1	158.1	158.1	155.4
1978	158.1	158.1	158.1	158.1	158.1	158.1	158.1	158.7	167.7	168.2	168.2	168.2	161.5
1979	168.2	168.2	171.0	178.6	178.6	178.6	178.6	178.6	178.6	185.7	187.3	187.3	178.3
1980	176.5	183.7	188.3	195.5	195.5	195.5	192.2	194.2	194.2	194.2	N.A.	194.2	191.3
1981	203.2	213.0	217.4	221.2	224.5	224.5	224.5	224.5	224.5	224.5	223.4	219.5	220.4
1982	219.5	222.2	220.7	220.7	216.3	207.2	207.2	207.2	207.2	213.9	213.9	213.9	214.2
1983	220.7	222.9	222.9	N.A.	222.9	226.7	226.7	226.7	230.7	230.7	230.7	N.A.	226.2
1984	231.8	238.8											

[1] Unbleached kraft. *Source: Bureau of Labor Statistics* (0913–0304.99) T.471

PAPER

U.S. Production & Consumption of Woodpulp, Pulpwood & Other Fibrous Materials in the Manufacture of Paper & Board In Thousands of Short Tons[6]

	Woodpulp Production												Consumption in the Manufacture of Paper and Board		
		Sulfite		Sulfate											
Year	Special Alpha[2]	Bleached	Unbleached	Bleached	Semi-Bleached	Unbleached	Soda	Groundwood	Semi-Chemical	Defibrated[3]	Screenings, Damaged, etc.	Total Wood Pulp	Wood Pulp[4]	Other Fibrous Materials[5]	Pulpwood[6]
1972	1,656	1,827	345	12,460	1,574	17,792	184	4,639	3,786	—2,502—		46,767	47,347	12,595	71,538
1973	1,637	1,810	374	13,055	1,826	18,165	188	4,670	3,864	—2,740—		48,327	48,772	13,257	73,596
1974	1,723	1,804	405	13,705	1,672	17,635	200	4,711	3,758	—2,736—		48,349	48,341	12,936	74,327
1975	1,583	1,594	357	12,448	1,396	15,369	N.A.	4,351	3,201	—2,785—		43,084	42,431	10,992	65,421
1976	1,443	1,599	435	13,696	1,298	17,784	N.A.	4,649	3,576	—3,242—		47,421	47,541	12,616	72,011
1977	1,436	—2,012—		14,384	1,244	18,436	N.A.	4,852	3,542	—3,226—		49,132	48,477	12,929	73,935
1978	1,405	—1,643—		15,218	1,198	18,693	N.A.	4,655	3,549	—3,233—		50,020	49,614	13,305	74,170
1979	1,447	—1,814—		16,763	N.A.	19,576	N.A.	4,619	3,889	N.A.		51,177	N.A.	13,739	77,362
1980[1]	1,417	—1,911—		17,561	N.A.	19,735	N.A.	5,301	3,947	N.A.		52,959	N.A.	13,185	79,703
1981[1]	1,356	—1,797—		—39,597—				5,594	3,753			53,413		13,523	79,725
1982[7]	1,104	—1,434—						5,030	3,257						

[1] Preliminary. [2] Also includes dissolving grades. [3] Or exploded. [4] Does not include wood pulp consumption by plants classified outside paper & board industries. [5] Waste paper; straw; rags; cotton fibre; manila stock; etc. [6] Data for pulpwood expressed in thousands of cords of 128 cu. ft.—roughwood basis. Pulpwood includes slabs, chips, & millwaste. [7] Estimate. *Sources: Bureau of the Census; American Paper Inst.* T.465

U.S. Foreign Trade in Pulpwood, Wood Pulp, Paper, Paper Board & Paper Products In Thousands of Short Tons

	Exports							Imports							
Year	Wood Chips	Wood Pulp	Waste Fibrous Mater.[3]	Paper	Paper Board	Construction P. & B.	Converted Paper & Board	Pulpwood Chips	Wood Pulp	Waste Fibrous Mater.	Paper	Paper Board	Construction P. & B.	Paper & BD. Products	Total Value of Imports Mill. $[4]
1972	2,524	2,237	415	569	2,288	79	166	978	3,773	132	7,519	8	461	39	1,791
1973	3,466	2,344	683	601	2,129	98	231	1,254	3,993	133	7,928	33	452	57	2,177
1974	3,866	2,806	1,383	923	2,471	125	348	818	4,123	133	7,874	34	339	62	2,964
1975	3,177	2,565	861	947	1,808	115	301	626	3,078	134	6,118	8	176	39	2,678
1976	3,947	2,518	1,273	928	2,134	128	333	1,051	3,727	163	6,962	13	264	65	3,295
1977	4,038	2,640	1,544	724	2,210	109	342	1,386	3,864	148	7,065	28	346	201	3,568
1978	3,618	2,599	1,599	552	2,299	82	520	1,791	4,025	127	8,347	100	503	327	3,992
1979	4,499	2,935	2,233	590	2,491	80	606	1,528	4,318	123	8,372	49	470	321	4,759
1980[1]	4,478	3,806	2,664	887	3,671	78	678	1,724	4,051	121	8,008	66	358	227	5,190
1981[2]	4,000	3,678	2,200	950	3,200	120	650	1,600	4,086	118	7,700	80	370	185	5,400
1982[2]		3,395							3,894						
1983[2]		3,675							4,095						
1983[2]															

[1] Preliminary. [2] Estimates. [3] Excludes rags for paperstock. [4] Paper base stocks, paper and manufactures. *Source: Dept. of Commerce* T.466

Paper and Board Production in the United States In Thousands of Short Tons

	Paper							Paperboard					Construction[3]		
Year	Newsprint	Coated Printing	Tissue Paper	Writing & Relat.	Coarse[2]	Sanitary	All Paper Total	Other Bleached Paperboard	Corrugating Material	Unbleac. Kraft	All Paperboard Total	Wet Machine Board	Construction (Paper)	All Construction Total	Total All Types
1972	3,451	3,546	3,977	3,329	5,713	3,796	25,435	1,964	4,992	13,030	28,522	148	1,915	5,352	59,457
1973	3,459	3,814	4,038	3,817	5,694	3,726	26,483	1,971	5,285	13,139	29,267	149	1,858	5,406	61,304
1974	3,395	3,974	4,286	4,102	5,731	3,800	26,674	1,957	5,093	12,755	28,017	144	1,845	5,118	59,930
1975	3,476	3,318	3,979	3,244	4,805	3,669	23,306	1,792	4,411	11,170	24,452	115	1,616	4,648	52,521
1976	3,400	3,967	4,186	3,910	5,661	3,936	26,612	1,894	5,045	12,501	27,840	130	1,771	5,316	59,898
1977	3,525	4,215	4,286	4,170	5,930	4,045	28,096	1,968	5,485	13,241	29,006	129	1,852	5,492	62,722
1978	3,489	4,513	4,215	4,277	5,778	4,036	28,506	1,634	5,792	N.A.	30,033	136	1,915	5,625	64,300
1979	3,778	4,580	4,520	4,596	5,708	4,403	30,012	1,841	5,918	13,857	30,936	144	1,868	5,516	66,329
1980	4,660	4,751	4,375	4,793	5,327	4,298	30,164	1,794	5,864	14,249	31,143	138	1,369	4,390	65,834
1981[1]	4,753	4,940	4,518	4,900	5,700	4,600	30,850	1,900	6,000	14,800	31,582	160	1,200	3,847	66,440
1982[4]	4,574	5,032	4,438	—Discontinued—											
1983[4]	4,688	5,723	4,773												
1984															

[1] Preliminary. [2] Packaging & industrial converting paper. [3] Paper and board. [4] Estimate. *Source: Bureau of the Census* T.467

Peanuts and Peanut Oil

The 1983/84 world peanut (groundnut) crop was estimated by the USDA in April 1984 at 18.5 million metric tons (in-shell basis), up 5.5 percent from estimated 1982/83 output. India harvested a record-large crop, but output in Senegal dropped 44 percent due to inadequate rainfall during the growing season, and production in Gambia and Nigeria was also adversely affected by drought.

The world crush of peanuts during 1983/84 was expected to increase by 4 percent, primarily because of India's larger crush. World peanut exports in 1983/84 were expected to be slightly higher than a year earlier. The U.S. is the world's largest exporter of peanuts, with 1983/84 exports expected to increase by about 14 percent over the 309,000 tonnes (in-shell basis) exported in 1982/83. U.S. origin edible peanut prices in Europe were significantly higher than a year earlier. World peanut exports in 1983/84 were estimated at 1,009 thousand tonnes versus 996 thousand in 1982/83, with a substantial reduction in exports from Africa expected to be more than offset by increased shipments from the U.S., India, and Brazil.

World peanut meal production in 1983/84 was estimated at 4.50 million tonnes, up from 4.27 million in 1982/83, and world exports at 451 thousand tonnes versus 506 thousand in 1982/83. India is the world's largest exporter of peanut meal, and West Germany and Poland are the largest importers. Total world domestic consumption of peanut meal was estimated by the USDA at 4.58 million tonnes vs. 4.36 million in 1982/83. Very little peanut meal is carried over from one season to the next, with 1983/84 ending stocks estimated at 39 thousand tonnes vs. 54 thousand at the end of the 1982/83 season.

Global peanut oil production in 1983/84 was estimated at 3.30 million tonnes compared with 3.19 million in 1982/83, but peanuts crushed by major oil exporters (Sudan, Brazil, Senegal, and Argentina) were forecast to be 28 percent below a year earlier. Peanut oil production by the major exporters was estimated at 244 thousand tonnes—down 100 thousand from a year earlier. France, the world's largest importer of peanut oil (and Senegals's single most important export market) was expected to import much less peanut oil because of reduced supplies—with the gap expected to be made up by increased imports of sunflowerseed, corn and rapeseed oils. Total world food use of peanut oil in 1983/84 was estimated by the USDA at 5.54 million tonnes, down slightly from 5.42 million in 1982/83. The U.S. is the world's largest user of peanut oil, followed by Indonesia. Ending stocks of peanut oil were forecast at 602 thousand tonnes versus 589 thousand at the end of the 1982/83 season.

The 1983 U.S. peanut crop totaled 3.27 billion pounds (1.48 million metric tons), 5 percent below 1982 output and 18 percent below the record-large 1981 crop. The 1.41 million acres planted in 1983 were 8 percent above 1982 but because of late plantings in most areas and extreme dry conditions during the growing season, the average yield of 2,380 pounds per acre was 316 pounds below the previous season's record. Due to the large supply (864 million pounds) at the start of the 1983/84 season on August 1, 1983, the total U.S. supply of peanuts for 1983/84 was only slightly below the 4.14 million pounds available for the preceding season.

U.S. peanut meal production in the 1983/84 season was estimated by the USDA at 72,000 tonnes versus 64,000 in 1982/83, consumption at 69,000 tonnes versus 66,000, and ending stocks at 5,000 tonnes compared with 2,000 a year earlier.

U.S. peanut oil production in 1983/84 was estimated at 55,000 tonnes versus 48,000 in 1982/83, domestic use at 52,000 versus 62,000 tonnes, and 1983/84 ending stocks at 9,000 versus 10,000 tonnes a year earlier.

U.S. Government Price Support

The 1984-crop national average support levels are $550 per short ton (27.5¢ per lb.)—the statutory minimum—for quota peanuts and $185 per short ton (9.25¢ per lb.) for non-quota "additional" peanuts, unchanged from 1983 support, with no deduction from the load advance for storage, handling, and inspection costs.

Poundage quotas are in effect for 1984-crop peanuts, but acreage allotments were suspended for the 1982 through 1985 crops under provisions of the Agriculture and Food Act of 1981. Peanuts marketed for domestic edible use in excess of the farm poundage quota are subject to a penalty of $770 per ton. The peanut marketing year begins August 1 and ends July 31. Price support is carried out primarily through non-recourse warehouse storage loans to approved grower assocations acting for farmers. The price may also be supported through loans to producers on farm-stored peanuts and through purchases from producers. Loans for the 1984 crop are available from the time of harvest through January 31, 1985.

World Production of Peanuts (in the Shell) In Thousands of Metric Tons

Crop Year	Argentina	Brazil	Burma	China (Mainland)	India	Indonesia	Mali	Nigeria	South Africa	Senegal	Sudan	Taiwan	Thailand	United States	Zaire (Congo)	World Total
1977–8	600	324	2,065	457	6,087	682	126	302	298	671	1,027	77	119	1,690	295	16,443
1978–9	372	340	2,377	390	6,208	708	107	341	179	1,053	815	92	102	1,793	295	17,837
1979–0	672	465	2,822	342	5,768	783	57	377	344	673	852	86	122	1,800	295	17,227
1980–1	337	545	3,601	438	5,005	791	92	560	307	521	707	88	130	1,044	320	16,131
1981–2	243	310	3,826	573	7,223	724	80	610	114	878	838	82	146	1,806	310	19,876
1982–3[1]	257	250	3,916	670	5,553	760	80	610	89	899	497	74	135	1,560	310	17,554
1983–4[2]	214	230	3,700	675	7,300	800			83	500	522			1,485		18,513

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.* T.474

PEANUTS AND PEANUT OIL

Salient Statistics of Peanuts in the United States

Crop Year	Acreage Planted (1,000 Acres)	Acreage Harvested For Nuts (1,000 Acres)	Average Yield Per Acre In Lbs.	Production Picked and Threshed 1,000 Lbs.	Season Farm Price ¢ Lb.	Farm Value Million Dollars	Thousand Pounds (Yr. Beg. Aug.)			
							Exports		Imports	
							Unshelled	Shelled	Unshelled	Shelled
1971-2	1,529	1,455	2,066	3,005,118	13.6	408,371	35,801	403,397	1,299	859
1972-3	1,533	1,486	2,203	3,274,761	14.5	475,367	4,369	385,588	1,039	443
1973-4	1,530	1,496	2,323	3,473,837	16.2	562,460	66,094	523,986	79	444
1974-5	1,520	1,472	2,491	3,667,604	17.9	657,987	17,703	548,083	127	466
1975-6	1,532	1,500	2,564	3,846,722	19.6	754,491	22,708	318,229	207	290
1976-7	1,549	1,518	2,464	3,739,190	20.0	746,675	24,765	580,496	432	66
1977-8	1,545	1,512	2,456	3,715,055	21.0	780,869	64,284	705,032	272	148
1978-9	1,541	1,509	2,619	3,952,384	21.1	833,885	94,612	745,593	53	161
1979-0	1,546	1,520	2,611	3,968,485	20.6	819,276	Not Available			
1980-1	1,521	1,399	1,645	2,301,282	25.1	578,292				
1981-2[1]	1,514	1,489	2,675	3,981,850	26.9	1,069,526				
1982-3[1]	1,309	1,275	2,696	3,438,330	25.1	863,021				
1983-4[2]	1,411	1,376	2,380	3,273,495	25.0	818,374				
1984-5[3]	1,411									

[1] Preliminary. [2] Estimate. [3] Prospective plantings. *Source: Economic Research Service, U.S.D.A.* T.475

Peanuts Supply & Disposition (Farmers' Stock Basis) & Support Program in the United States

Crop Year Begin. Aug. 1	Supply				Disposition						Government Support Program				
								Domestic Food Use					Amount Put under Support		
	Production[3]	Imports	Stocks Aug. 1	Total	Exports & Shipments	Crushed for Oil	Seed, Feed & Residual	Military	Civilian	Civilian per Capita Lbs.	Support Price	Additional	Quantity Mil. Lbs.	% of Prod.	Owned by CCC July 31 Mi. Lbs.
	Million Pounds										¢ per lb.				
1971-2	3,005	2	453	3,460	552	814	79	—	1,623	7.9	13.42		1,238	41.2	4
1972-3	3,275	2	392	3,669	521	850	175	—	1,694	8.2	14.25		1,277	39.0	24
1973-4	3,474	1	429	3,904	709	683	119	—	1,840	8.8	16.42		1,029	29.6	0
1974-5	3,668	1	553	4,222	740	590	−54	—	1,800	8.5	18.30		1,072	29.2	552
1975-6	3,847	1	1,146	4,993	434	1,447	193	—	1,859	8.7	19.70		1,136	29.5	958
1976-7	3,739	1	1,060	4,800	783	1,108	513	—	1,789	8.4	20.70		854	22.8	0
1977-8	3,726	1	608	4,324	1,025	487	392	—	1,838	8.5	21.50		535	14.4	2
1978-9	3,952	1	581	4,534	1,141	527	284	—	1,996	9.2	21.00	12.5	515	12.9	—
1979-0	3,968	1	586	4,555	1,057	571	271	—	2,028	9.3	21.00	15.0	709	17.9	—
1980-1	2,301	401	628	3,330	503	446	321	—	1,647	9.0	22.75	12.5	337	14.6	—
1981-2	3,982	2	413	4,403	576	574	558	—	1,933		22.75	12.5	835	20.9	2
1982-3[1]	3,438	2	756	4,196	681	341	254	—	2,056		27.50	10.0	539	15.7	—
1983-4[2]	3,273	2	864	4,139	700	376	238	—	2,075		27.50	9.3			
1984-5															

[1] Preliminary. [2] Estimate. [3] Production is on a net weight basis. *Source: Economic Research Service, U.S.D.A.* T.476

U.S. Production of Peanuts (Harvested for Nuts) by States In Millions of Pounds

Crop Year	Alabama	Arkansas	Florida	Georgia	Louisiana	Mississippi	New Mexico	No. Car.	Oklahoma	So. Car.	Tennessee	Texas	Virginia	U.S. Total
1971	401.6	—	139.9	1,269.9	—	16.5	16.6	325.5	219.0	30.0	—	366.8	219.5	3,005
1972	368.4	—	137.7	1,341.4	—	16.0	20.5	370.2	242.7	31.8	—	480.5	265.7	3,275
1973	400.0	—	150.4	1,344.0	—	16.6	18.9	466.5	253.7	30.1	—	471.2	322.4	3,474
1974	474.4	—	170.5	1,661.5	—	6.0	13.0	384.3	217.7	31.0	—	413.3	295.9	3,668
1975	535.6	—	177.7	1,726.6	—	13.5	20.2	373.7	232.3	29.5	—	463.6	284.6	3,847
1976	513.6	—	165.0	1,554.3	—	12.3	21.7	440.7	246.0	24.6	—	463.6	309.0	3,739
1977	589.1	—	170.5	1,499.1	—	11.6	25.4	444.1	267.6	31.2	—	394.5	293.0	3,715
1978	551.8	—	182.1	1,725.3	—	13.1	24.1	465.4	207.0	35.7	—	436.5	311.6	3,952
1979	584.9	—	179.9	1,704.8	—	12.4	25.3	378.5	264.0	32.3	—	533.0	253.5	3,968
1980	265.0	—	143.0	994.6	—	7.5	22.4	291.3	140.2	14.3	—	293.3	129.8	2,301
1981	602.7	—	178.0	1,655.5	—	12.7	24.9	555.6	189.3	39.0	—	393.3	330.8	3,982
1982	522.2	—	153.0	1,517.5	—	—	25.2	415.3	174.6	30.0	—	325.1	275.5	3,438
1983[1]	455.7	—	160.2	1,556.7	—	—	25.9	313.9	180.0	25.6	—	360.8	194.8	3,273
1984														

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.477

Disappearance and Reported Uses of Peanuts and Products in the U.S. In Millions of Pounds

	Apparent Disappear.[2] (Milled Peanut Prod.)						Reported Used (Shelled Peanuts—Raw Basis)								
	Shelled Peanuts						Edible Grades Used in								
							Peanut								
Year Begin. Aug. 1	Edible Grades	Oil Stock[3]	Total All Grades	Cleaned (In Shell)	Crude Peanut Oil[4]	Cake & Meal[4]	Candy	Salted	Sand-wich Spread	Butter[5]	Other Products	Total	Oil Stock Crushed For Oil, Cake & Meal	Total All Grades
1971–2	1,452	512.0	1,964	116.1	263.3	353.0	246.0	241.7	25.6	556.8	17.0	1,087	612.3	1,699
1972–3	1,487	575.3	2,062	116.6	265.7	355.8	259.8	254.4	25.6	578.1	17.6	1,136	638.8	1,774
1973–4	1,559	518.8	2,078	152.1	214.7	285.1	251.5	284.3	23.9	660.0	19.3	1,239	513.6	1,753
1974–5	1,637	551.0	2,188	129.4	181.0	242.0	217.0	278.3	20.4	651.0	14.4	1,181	443.7	1,625
1975–6	1,555	852.2	2,407	142.0	471.3	605.8	239.7	301.6	21.0	648.1	16.0	1,226	1,088	2,314
1976–7	1,700	783.2	2,483	163.2	342.9	460.7	235.0	253.8	24.2	617.9	17.8	1,149	833.2	1,982
1977–8	1,895	461.2	2,356	190.6	179.1	208.9	235.2	274.2	28.2	623.8	18.7	1,180	366.2	1,546
1978–9	1,955	426.9	2,382	210.9	161.6	227.9	268.4	291.6	28.1	664.9	19.1	1,272	396.0	1,668
1979–0	1,979	503.9	2,483	201.4	175.3	228.4	258.4	284.9	30.3	700.0	19.3	1,293	429.1	1,722
1980–1	1,097	306.0	1,403	120.3	143.5	188.7	237.9	205.5	24.1	588.6	19.7	1,076	335.5	1,411
1981–2[1]	1,096	377.6	2,283	200.7	155.7	234.9	255.9	278.0	22.7	653.7	15.3	1,226	431.5	1,657
1982–3[6]				200			303	322	22	662	16	1,325		
1983–4														

[1] Preliminary. [2] Includes in transit, exports and domestic use, except for oil stock for which disappearance is assumed to equal crushings. [3] Graded & ungraded oil stock only. [4] Relates to peanut oil mills only. [5] Peanuts used in peanut butter by mfrs. for own use in candy is included under peanut candy. [6] Estimate. *Source: Statistical Reporting Service, U.S.D.A.* T.481

Visible Supply (Stocks) of Peanuts and Products on Hand in the U.S. In Millions of Pounds

	Farmers' Stock Peanuts[2]				Shelled Edibles								
Year Begin. Aug. 1	Vir-ginias	Run-ners	Span-ish	Total	Vir-ginias	Run-ners	Span-ish	Total	Shelled Oil Stock[3]	Total Shelled	Roasting Stock[5]	Crude Peanut Oil[4]	Peanut Cake & Meal[4]
1971–2	3.2	4.0	7.0	14.2	126.9	81.1	83.0	291.0	27.1	318.0	16.0	11.8	21.6
1972–3	3.4	8.2	15.7	27.4	66.9	90.7	67.0	224.5	33.8	258.3	20.9	8.5	3.0
1973–4	2.9	48.7	5.2	56.9	45.2	122.0	73.5	240.6	25.6	266.3	17.7	11.7	7.0
1974–5	3.8	30.4	4.2	38.4	87.3	209.5	62.9	359.8	16.2	375.9	15.1	10.9	6.8
1975–6	16.4	193.8	16.8	227.0	89.3	129.9	60.2	279.4	20.7	300.1	17.8	18.3	10.4
1976–7	4.0	244.0	1.9	250.0	68.5	159.9	87.2	315.7	83.2	398.8	30.6	22.9	5.9
1977–8	2.0	49.4	3.0	54.4	62.1	255.0	55.4	372.5	29.8	402.3	18.2	42.6	11.7
1978–9	8.0	20.0	.6	28.7	62.5	251.6	44.8	359.0	37.4	396.4	25.6	14.5	10.9
1979–0	7.2	5.9	.3	13.5	87.7	214.2	46.1	348.0	46.4	394.4	48.2	17.2	1.0
1980–1	8.4	44.0	11.0	63.4	67.9	265.4	38.4	401.1	29.5	401.1	30.6	21.6	8.8
1981–2	14.1	14.1	.2	28.3	56.6	181.0	30.7	268.3	10.4	278.6	14.4	15.9	7.3
1982–3[1]	24.3	60.6	0	84.9	129.0	273.3	48.2	450.4	20.6	471.0	45.2	4.3	2.3
1983–4													

[1] Preliminary. [2] Excludes stocks on farms, but includes stocks owned or held for account of C. C. C. [3] Includes ungraded or straight run peanuts. [4] Relates to peanut oil mills only. [5] Cleaned & unshelled. *Source: Agricultural Marketing Service, U.S.D.A.* T.478

Millings and Production of Peanuts and Products in the U.S. In Millions of Pounds

	Millings				Production										
	Farmers' Stock Peanuts[2]				Shelled Edibles										
Year Begin. Aug. 1	Vir-ginias	Run-ners	Span-ish	Total	Vir-ginias	Run-ners	Span-ish	Total	Shelled Oil Stock	Total All Grades	Cleaned (In Shell)	Shelled Peanuts Crushed	Crude Peanut Oil	Peanut Cake & Meal
1971–2	675.1	1,066	909.5	2,650	303.0	565.3	517.3	1,386	518.7	1,904	121.0	612.3	260.0	334.4
1972–3	689.1	1,288	911.4	2,888	284.9	666.7	551.6	1,503	567.1	2,070	113.3	638.8	269.0	359.8
1973–4	784.2	1,398	869.1	3,051	378.2	778.4	522.0	1,679	509.3	2,188	149.5	513.6	213.9	285.0
1974–5	636.1	1,646	641.3	2,923	283.3	892.2	381.6	1,557	558.4	2,116	132.2	443.7	188.4	245.6
1975–6	663.6	2,213	584.6	3,462	283.5	966.5	340.9	1,591	914.7	2,506	154.8	1,088	476.0	601.2
1976–7	669.7	2,356	429.9	3,455	271.6	1,212	273.8	1,757	729.8	2,487	150.8	833.2	362.6	466.5
1977–8	734.0	2,246	368.7	3,349	284.2	1,383	214.8	1,882	468.8	2,350	198.1	366.2	151.0	208.1
1978–9	805.5	2,272	346.4	3,424	320.4	1,413	210.5	1,944	436.0	2,380	233.5	396.0	164.3	218.0
1979–0	682.9	2,496	323.7	3,502	254.2	1,573	176.1	2,003	487.0	2,490	183.8	429.1	179.7	236.2
1980–1	387.4	1,395	105.6	1,888	134.8	797.5	61.0	993.3	286.9	1,280	104.1	335.5	137.8	187.2
1981–2[1]	897.6	2,477	236.1	3,611	328.4	1,620	139.6	2,088	387.8	2,476	231.6	431.5	175.0	237.3
1982–3														

[1] Preliminary. [2] For prod. of shelled edible grades, oil stock (including ungraded or straight run peanuts) and roasting stock. *Source: Agricultural Marketing Service, U.S.D.A.* T.480

PEANUTS AND PEANUT OIL

Average Price Received by Producers in U.S. for Peanuts in the Shell In Cents Per Pound

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average[1]
1970-1	12.9	13.2	12.3	11.9	13.0	12.0	—	—	—	—	—	12.9	12.6
1971-2	13.5	13.8	13.6	13.9	—	—	—	—	—	—	—	13.0	13.6
1972-3	14.8	14.3	14.3	14.3	14.2	—	—	—	—	—	—	15.0	14.5
1973-4	16.1	16.4	16.1	16.5	16.6	—	—	—	—	—	—	17.7	16.2
1974-5	17.9	18.1	17.6	17.8	17.6	—	—	—	—	—	—	18.4	17.9
1975-6	19.7	19.8	19.6	18.7	—	—	—	—	—	—	—	19.1	19.6
1976-7	19.8	19.9	20.0	20.0	20.2	—	—	—	—	—	—	21.3	20.0
1977-8	20.9	20.9	20.4	20.4	21.5	—	—	—	—	—	—	21.2	21.0
1978-9	20.8	21.4	21.0	20.8	21.2	—	—	—	—	—	—	21.1	21.1
1979-0	21.4	20.3	20.3	20.6	20.4	—	—	—	—	—	—	21.0	20.6
1980-1[2]	20.7	22.0	27.1	37.1	49.2	—	—	—	—	—	—	32.6	25.1
1981-2[2]	28.6	26.5	25.7	26.8	24.9	—	—	—	—	—	—	25.3	26.9
1982-3[2]	24.9	25.2	25.2	25.5	—	—	—	—	—	—	—	27.0	25.6
1983-4[2]	24.8	24.0	24.6	24.2	29.2	—	—	—					
1984-5													

[1] Weighted average by sales. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.479

Crude Peanut Oil Produced[2] in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	17.7	12.8	12.1	13.3	17.2	22.8	29.2	29.1	33.6	34.6	27.6	25.3	275.3
1976	26.6	32.6	44.3	51.1	56.9	66.5	47.6	41.5	39.0	31.5	24.6	24.5	486.6
1977	20.7	24.7	35.5	33.0	32.8	30.1	24.7	22.4	6.9	6.1	10.5	4.4	252.0
1978	9.7	9.2	11.1	18.0	18.1	18.1	10.4	16.6	7.7	10.3	6.3	9.5	145.2
1979	11.7	14.2	22.5	18.6	23.0	15.5	8.2	10.8	4.5	4.5	6.1	7.7	183.0
1980	6.2	15.1	16.7	25.9	30.7	22.9	23.5	21.2	5.9	2.1	6.3	5.9	182.4
1981	6.1	6.0	10.5	17.3	19.1	19.5	13.6	9.8	5.3	9.7	12.0	12.7	141.6
1982	11.3	11.1	19.4	26.3	22.3	19.0	15.0	11.8	N.A.	N.A.	N.A.	N.A.	N.A.
1983[1]	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1984[1]	12.1	13.3	11.1										

[1] Preliminary. [2] Not seasonally adjusted. *Source: Statistical Reporting Service, U.S.D.A.* T.473

Average Price of Domestic Crude Peanut Oil (in Tanks) F.O.B. Southeast Mills In Cents Per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1970-1	19.8	19.8	20.2	21.1	21.1	20.4	19.8	20.6	20.4	21.4	21.8	20.6	20.6
1971-2	19.8	19.9	20.4	19.3	19.0	20.1	21.6	21.3	20.6	20.9	19.9	19.3	20.2
1972-3	19.4	20.8	22.3	22.1	21.7	20.9	21.7	23.0	23.7	23.6	34.1	26.4	23.3
1973-4	28.0	28.6	37.1	42.4	48.0	49.8	48.5	49.8	50.9	49.9	50.9	49.8	44.5
1974-5	52.6	50.9	49.8	46.6	45.9	40.5	39.3	36.6	40.9	47.3	52.7	49.3	46.6
1975-6	42.2	39.3	35.3	35.4	37.8	38.9	35.4	31.0	33.5	38.3	36.4	38.0	37.1
1976-7	38.0	37.3	38.9	40.3	41.0	40.8	43.6	35.5	34.7	29.8	29.2	30.7	36.6
1977-8	34.1	33.4	42.8	47.3	44.9	41.2	46.6	48.1	47.1	44.5	44.9	48.6	43.6
1978-9[1]	45.1	49.7	46.0	51.4	47.4	37.9	40.9	41.2	36.5	39.0	37.0	35.5	42.3
1979-0	34.4	31.1	29.5	25.9	25.8	22.9	20.5	22.4	23.1	26.9	33.2	36.0	27.6
1980-1	35.8	48.7	49.1	47.7	39.3	34.1	34.0	37.1	38.0	38.1	43.2	40.3	40.5
1981-2	34.5	34.5	30.9	27.3	31.4	23.3	29.1	29.9	26.2	24.7	22.7	22.5	28.1
1982-3	22.9	25.2	26.1	25.6	25.7	24.1	25.1	26.4	26.4	26.7	30.7	50.5	28.0
1983-4	50.7	48.8	48.1										
1984-5													

[1] Prices prior to 1978-9 are for REFINED in New York. *Source: Agricultural Marketing Service, U.S.D.A.* T.485

World Imports of Peanut Oil (Crude & Refined) into Specified Countries In Thousands of Metric Tons

Crop Year	Algeria	Australia	Austria	Belgium-Lux.	Venezuela	Canada	Dominican Rep.	France	West Germany	Hong Kong	Italy	Singapore	Netherlands	Switzerland	Portugal	United Kingdom
1969	.5	4.6	6.3	17.1	—	8.4	.5	134.9	57.0	14.0		5.0	8.6	—	5.1	85.2
1970	.9	6.9	4.0	21.4	—	8.8	5.5	142.6	52.3	12.3		6.1	9.4	—	6.7	95.8
1971	0	4.7	4.4	28.5	4	5.3	17	124.0	54.7	15.0		4.8	11.1	—	3.6	67.8
1972	13	4.3	4.3	32.9	2	7.4	17	205.9	71.5	15.5		3.6	9.2	—	8.3	60.8
1973	30	2.4	4.7	32.0	15	7.4	14.1	167.3	66.3	16.2		4.0	20.0	—	5.5	74.8
1974	1	4	3	23	5	6	4	142	51	12		6	15	—	2	37
1975	0	3	3	21	32	7	4	179	38	16		1	9	—	6	29
1976	6	2	2	31	38	7	16	218	37	20	22	3	8	—	—	20
1977	5	4	2	29	64	7	15	217	37	23	31	2	8	—	—	16
1978	—	1	2	25	66	6	2	186	38	22	30	2	11	14	—	15
1979	—	2	2	35	1	5	—	221	40	25	46	2	21	20	—	15
1980	—	—	3	42	—	5	—	247	39	29	42	3	34	20	—	17
1981				33				161	26	28	20		23	10		12
1982				44				184	28	26	34		14	11		15
1983[1]				61				215	22	28	30		20	11		17
1984																

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

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Production, Consumption, Stocks and Foreign Trade of Peanut Oil in the U.S. In Millions of Pounds

Year	Production		Consumption		Stocks—Dec. 31		Imports for Consumption	Exports	
	Crude	Refined	In Refining	In End pdt's.	Crude	Refined		Crude	Refined
1969	188.2	148.6	153.7	157.4	8.0	6.3	—	31.6	1.9
1970	196.5	157.6	163.3	168.0	8.7	6.6	—	24.7	7.3
1971	280.6	183.3	189.8	189.2	7.8	8.4	—	84.2	.8
1972	257.8	170.9	177.4	178.1	15.9	5.2	—	60.0	.7
1973	265.9	156.0	162.3	160.5	18.9	6.2	—	100.1	3.3
1974	185.0	128.9	134.9	130.4	16.5	7.2	1.1	45.1	.7
1975	275.3	144.9	150.8	122.7	42.6	23.1	.7	17.6	9.2
1976	486.6	259.9	267.8	249.7	192.3	17.4	1.2	9.7	95.7
1977	252.0	249.7	257.2	243.9	91.5	7.6	—	71.8	9.7
1978	145.2	171.9	178.0	169.0	7.3	4.7	—	71.7	17.2
1979	183.0	130.1	134.3	120.4	22.6	7.3			
1980	182.4	170.6	166.7	165.3	7.5	4.3			
1981	141.6	122.8	133.5	115.3	12.9	5.2			
1982[1]	N.A.	148.0	162.1	150.2	N.A.	4.5			
1983[1]	N.A.	165.0	178.5	169.4	N.A.	2.9			
1984									

[1] Preliminary. *Source: Bureau of Census*

T.483

Utilization of Peanut Oil in the United States In Thousands of Pounds

Year Begin. Aug.	Shortening	Margarine	Cooking and Salad Oils	Other Edible	Total Food Uses	Non-Food Uses	Factory Consumption	Foots & Loss	Domestic Disappearance
1969–0	16,000	1,000	129,000	—	145,000	9,000	164,000	5,000	154,000
1970–1	16,000	—	152,000	13,000	181,000	12,000	188,000	7,000	193,000
1971–2	15,000	—	160,000	8,000	183,000	12,000	196,000	7,000	195,000
1972–3	14,000	—	122,000	11,000	147,000	11,000	156,000	6,000	159,000
1973–4	23,000	—	124,000	1,000	147,000	11,000	167,000	6,000	158,000
1974–5	13,000	—	87,000	44,000	145,000	8,000	116,000	5,000	153,000
1975–6	27,000	28,000	150,000	59,000	264,000	12,000	232,000	9,000	276,000
1976–7	29,000	27,000	143,000	26,000	225,000	8,000	218,000	6,000	232,000
1977–8	20,000	—	211,000	−47,000	183,000	11,000		8,000	194,000
1978–9	16,000		96,000						120,000
1979–0[1]			148,000						193,000
1980–1[2]			105,000						150,000
1981–2[2]			127,000		139,000				
1982–3[2]			162,000		174,000				

[1] Preliminary. [2] Estimate. *Source: Bureau of the Census*

T.484

Pepper

Reflecting disappointing harvests in most producing countries, black and white pepper prices rose sharply in the closing months of 1983. Brazil, Malaysia, and Indonesia all produced smaller crops, and the November–October 1983/84 crop in India was forecast to be below the bumper outturn of the previous season. Thus, world consumption in 1983 was estimated to have exceeded production, causing prices to increase in response to the tight supply situation.

New York spot prices for Brazilian black pepper began 1983 at an average of 53 cents per pound in January, closing out the year at an average of 99 cents in December. Prices remained firm during the first month of 1984, but then eased somewhat during the remainder of the first quarter. Carryover stocks had helped to keep supply and demand in close balance in 1983, but, given the unusually low level of most pepper stocks, supplies are expected to remain tight—at least until the new crops are harvested later in 1984. World pepper production levels are difficult to estimate because farmers often hold stocks rather than sell for local currency, which is subject to high inflation rates and generally unstable exchange rates in many pepper producing countries.

The Eleventh Session of the International Pepper Community, (IPC) was held in Kuala Lumpur, Malaysia in late July 1983, when it was agreed to establish a single floor price for exports of all grades of black pepper. The new price was to be 65 cents per pounds, c.i.f. New York, effective August 8, with an increase to 70 cents on November 1, 1983. Prices previously were set at 65 cents for Brazil, Malaysia, and Indonesia, and at 72 cents for India. As a rule, the IPC had not been successful in enforcing sales at the established minimum price levels.

World exports of black and white pepper in 1982 had totaled about 129,000 tonnes, slightly below the 1981 shipment level of 132,000 tonnes. Exports in 1983 were estimated to have been somewhat below the 1982 level, because smaller shipments by Brazil, Malaysia, and Indonesia were mostly offset by larger Indian exports. World exports in 1984 are forecast to decline again, reflecting the reduced crops in major producing countries.

U.S. imports of black pepper totaled 28,346 metric tons, nearly 2 percent above the 27,811 tonnes imported in 1982. U.S. imports of white pepper in 1983 amounted to nearly 3,130 tonnes, 15 percent above 1982 imports of 2,721 tonnes. Black and white ground pepper imports in 1983 totaled 166.6 tonnes, compared with 81.6 tonnes in 1982.

World Exports of Pepper (Black & White) by Major Producing Countries In Metric Tons

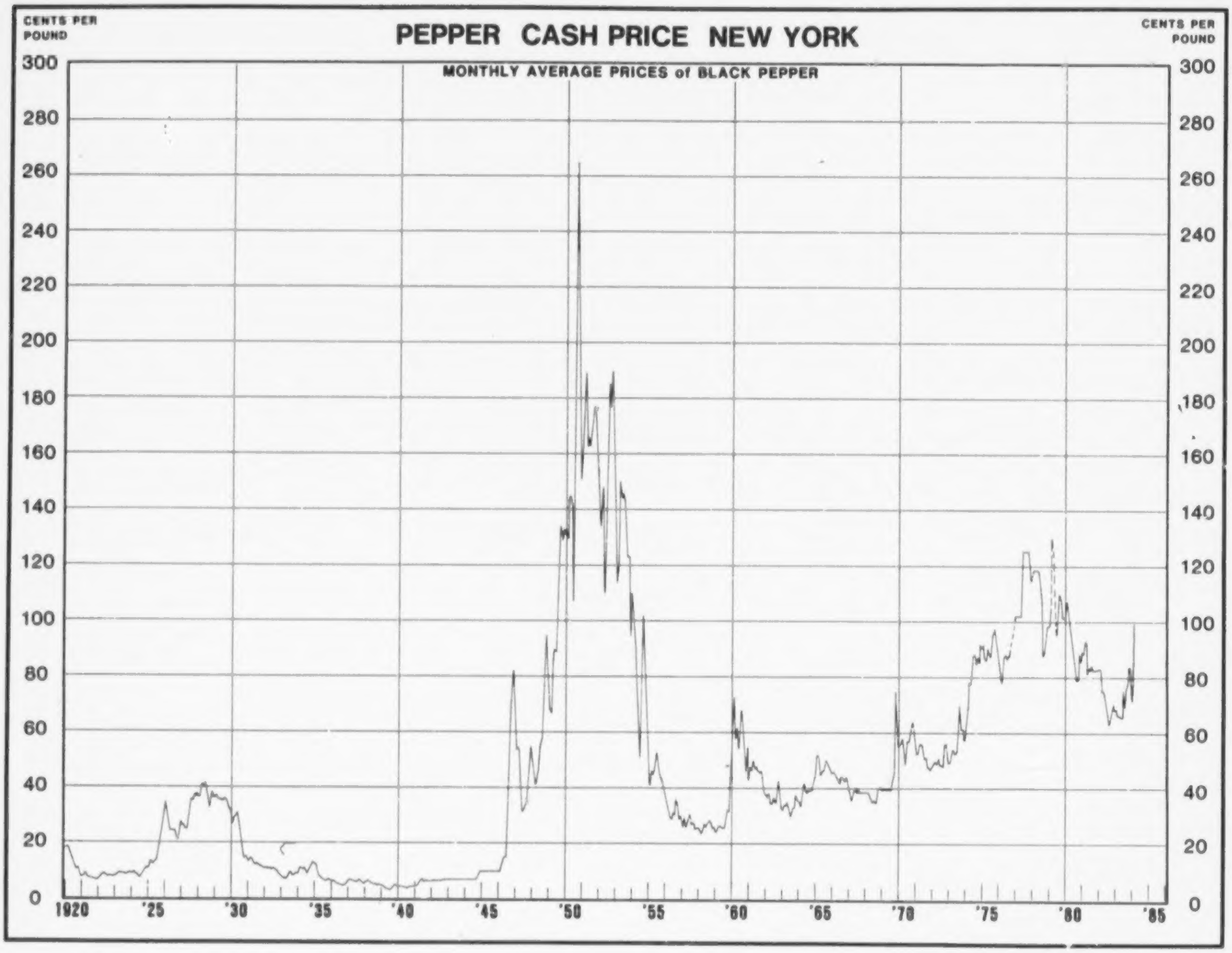
Year	Brazil	India	Indonesia	Singapore[2]	Madagascar	Sarawak	Sri Lanka
1971	17,235	16,901	23,566		1,284	26,914	46
1972	15,297	20,627	22,756		3,826	26,177	107
1973	13,761	27,942	25,452		3,193	22,830	518
1974	15,491	28,569	15,188		2,241	28,933	337
1975	17,944	24,399	14,525		3,461	29,815	96
1976	19,986	17,813	29,481		2,958	34,850	10
1977	17,099	25,892	30,856		3,748	26,795	635
1978	29,505	19,370	37,090	40,904	1,560	30,780	1,205
1979	25,186	20,545	24,986	38,395	1,894	36,118	876
1980	31,964	26,795	29,345	33,233	1,674	30,709	945
1981	46,895	18,636	33,996	30,098	N.A.	28,696	2,042
1982[1]	44,539	20,454	36,327	26,459	N.A.	25,010	1,238
1983							

[1] Preliminary. [2] Reexports. *Source: Foreign Agricultural Service, U.S.D.A.* T.486

United States Imports of Pepper from Specified Countries In Metric Tons[2]

	Black Pepper									White Pepper					
Year	Brazil	Mexico	Sri Lanka (Ceylon)	India	Indonesia	Malaysia	Singapore	China	Total	Brazil	China	Indonesia	Malaysia	Singapore	Total
1971	13,433		28.5	6,993	25,767	6,543	1,895		54,941	88.2	—	4,069	329.4	336.2	4,915
1972	8,869		—	2,753	28,911	5,088	1,778		47,440	148.8	—	4,875	158.2	210.1	5,449
1973	8,630		302	9,690	29,627	544	849		49,827	730.9	—	4,446	58.3	330.1	5,588
1974	6,914		90	16,277	19,627	5,415	1,283	—	49,781	121.4	—	5,627	189.8	155.7	6,327
1975[2]	6,436		41	6,708	4,613	4,487	773	10	23,156	170	—	1,514	63	59	1,813
1976	6,609		—	359	11,774	4,037	1,321	3	24,128	53	—	2,118	56	128	2,362
1977	5,282		157	4,890	9,466	3,140	478	—	23,540	40	—	2,765	42	63	2,920
1978	10,472		186	1,880	10,595	2,293	604	6	26,142	285	—	1,994	64	28	2,382
1979	9,704		281	627	10,898	2,644	156	61	24,482	414	10	2,159	51	94	2,756
1980	10,075		153	3,993	11,408	3,640	296	1	29,644	509	35	2,419	100	131	3,194
1981	14,716	31	295	559	12,615	273	37	21	28,563	763	1	1,561	43	75	2,503
1982	14,887	10	172	848	11,620	172	63	3	27,811	423	1	2,194	—	95	2,721
1983[1]	13,047	—	256	2,498	12,327	25	120	3	28,346	571	17	2,460	—	65	3,130

[1] Preliminary. [2] Data prior to 1975 are in THOUSANDS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.* T.487



PEPPER CASH PRICE NEW YORK

MONTHLY AVERAGE PRICES of BLACK PEPPER

Average Black Pepper Prices in New York (Lampong-Whole Pepper) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	52.5	52.5	56.0	56.0	55.0	52.5	51.0	51.0	48.0	47.0	46.5	47.0	51.3
1972	49.0	49.5	49.0	49.0	51.0	48.5	48.5	48.0	56.0	56.0	52.0	49.3	50.5
1973	49.3	52.0	54.0	53.0	52.5	53.0	65.0	70.0	61.0	61.0	57.5	61.0	57.4
1974	64.0	70.0	78.0	78.0	85.0	88.0	88.0	85.0	87.5	85.5	92.0	91.0	82.7
1975	91.5	87.0	86.0	90.0	89.0	87.5	88.5	95.0	97.0	94.0	87.5	85.0	89.8
1976	81.0	79.0	77.5	88.0	88.0	87.0	87.5	87.5	N.A.	N.A.	N.A.	102.0	86.4
1977	102.0	102.0	102.0	102.0	125.0	125.0	125.0	125.0	125.0	125.0	114.5	N.A.	115.7
1978	118.5	118.5	118.5	118.5	117.5	109.0	107.5	88.0	88.5	95.5	98.5	98.5	106.4
1979	105.0	N.A.	130.0	N.A.	N.A.	95.0	97.0	110.0	108.0	108.0	102.0	101.3	106.3
1980	108.0	101.0	96.3	93.0	87.0	84.3	82.8	79.0	79.0	88.0	86.5	89.3	89.5
1981	88.5	93.3	92.0	81.0	83.0	82.3	84.0	82.5	82.3	82.3	82.5	82.5	84.7
1982	82.5	82.5	75.0	75.0	70.0	69.0	67.0	63.0	69.0	70.5	68.5	68.3	71.7
1983	68.3	66.5	66.3	65.5	65.5	65.5	75.0	69.3	76.3	77.3	83.5	83.5	71.9
1984	83.5												

Source: Bureau of Labor Statistics (0289–0131) T.488

Petroleum

Due to rising energy prices, conservation gains were recorded in all sectors of the economy. Congressional enactment of mandatory automobile fuel efficiency standards, incentives for insulating residential and commercial structures, and tax incentives for industry to conserve energy further reduced demand. High energy prices and declining consumption coincided with the phased decontrol of U.S. domestic crude oil prices. As a result, the wellhead price of domestic crude increased 151 percent between 1979 and 1981. This created an unprecedented surge in domestic oil exploration and development. Producing companies purchased large new tracts of domestic acreage, and contract drilling and other oilfield service firms experienced a rapid increase in demand for their services. Domestic rotary rigs in operation increased 82 percent between 1979 and 1981.

This boom in oil exploration set the stage for a sharp decline in oil prices. Prices for domestic crude peaked in 1981 and then leveled off in 1982 to an annual average of $28.52 per barrel. In early 1983, prices began to decline further. Although 1983 prices were well above pre-embargo levels (even in real terms), the impact of falling prices on the domestic oil and gas industry was severe, especially for firms that had based extensive expansion plans on the prospects for rising prices. (The number of rotary rigs in operation fell 40 percent in 1982.) Notwithstanding the 1982–83 decline in oil prices, drilling rates remain substantially higher than in the early 70's.

Overall U.S. petroleum consumption remained essentially unchanged in 1983. The rising demand resulting from economic recovery was offset by reduced heating requirements during a relatively mild winter and by continued energy conservation efforts. With domestic crude oil production unchanged, imports of crude oil and petroleum products also changed very little for the year as a whole. The annual data, however, concealed a pattern of increased petroleum consumption and imports that could have been attributed to the progression of the economic recovery.

Petroleum consumption declined in 1983 to about 15.2 million barrels per day. While the decline from 1982 levels was slight, consumption was about 20 percent below the 1978 peak.

Domestic crude oil production in 1983 was about 8.7 million barrels per day. This figure changed little during the past decade because a decline in production in the lower 48 states was largely offset by increased production from Alaska. Alaska accounted for about 20 percent of U.S. production in 1983. The decline in consumption during the last 5 years has led to large decreases in petroleum imports. Although gross imports of crude oil and petroleum products in 1983 were about 5.1 million barrels per day, or about the same as in 1982, they were 15 percent less than in 1981 and 42 percent less than in peak year 1977. Crude oil accounted for about 68 percent of imports in 1983. In recent years, about 6 percent of crude oil imports have been for the Strategic Petroleum Reserve (SPR).

Crude oil prices, which declined through the first quarter of 1983, have since stabilized. This stability can be largely attributed to the OPEC accord in March 1983 that set both marker prices and production quotas. Price stability is expected to continue, but worldwide economic recovery could create new strains on prices if the OPEC countries lose more of the market to non-OPEC countries. Excess production capacity among OPEC members is expected to continue for some time.

1984 U.S. energy consumption is projected to increase 5 percent from 1983, to 73.8 quadrillion Btu. The increase in petroleum consumption (5 percent) is expected to be approximately the same as for coal, but substantially less than for natural gas (7 percent) and nuclear power (9 percent). Nonetheless, the absolute increase in petroleum consumption will likely exceed the absolute increase in consumption of any other form of energy. Petroleum's large share of total energy consumption will remain essentially unchanged.

The increase in petroleum consumption in 1984 may occur principally in distillate and residual fuels. Residual fuel consumption is expected to increase more than 13 percent above the depressed level of 1983. Little change can be expected in motor gasoline consumption, since an increase in miles traveled is expected to be offset by improved vehicle efficiencies. The increase in natural gas consumption will reflect the impact of economic recovery.

Domestic production of energy is expected to increase by nearly 3 percent in 1984. Production of crude oil is expected to decline by about 1 percent as gross imports of petroleum increase by more than 20 percent, but production of all other major forms of energy is expected to increase substantially: natural gas more than 7 percent, coal nearly 6 percent, and nuclear power nearly 9 percent. Crude oil's share of total U.S. energy production is expected to decline from about 30 percent in 1983 to 28.8 percent in 1984.

Late 1983 average wellhead crude oil prices were expected to hold through 1984. Companies can be expected to continue the more economic drilling programs begun in the 1980–81 period. Competition among oil field firms had reduced drilling costs in 1983, and these costs are not expected to rise in the near term. Increased crude oil and product imports will meet the bulk of expanded consumption, and no substantial increase in oil field activity is anticipated. The industrial and electric utility sectors are projected to have the greatest increases in energy consumption. Conservation efforts already in place in the transportation sector are expected to continue the trend toward lower aggregate consumption.

No sharp increases in real petroleum prices are expected during 1984 and beyond, and therefore there is expected to be little incentive to increase domestic oil production or reserves. The industry should be able to readily meet any increased demand in 1984.

Futures Markets

Crude petroleum futures are traded on the New York Mercantile Exchange (NYMEX) and the Chicago Board of Trade.

World Production of Crude Petroleum, by Specified Countries In Thousand Barrels Per Day

Year	Algeria	Canada	China	Libya	Iran	Iraq	Kuwait	Nigeria	Mexico	Indonesia	Un. King.	USSR	Saudi Arabia	United States	Venezuela	World Total
1975	983	1,439	1,490	1,480	5,350	2,262	2,084	1,783	705	1,307	12	9,625	7,075	8,375	2,346	52,880
1976	1,075	1,295	1,670	1,933	5,883	2,415	2,145	2,067	831	1,504	245	10,143	8,577	8,132	2,294	57,312
1977	1,152	1,320	1,874	2,063	5,663	2,348	1,969	2,085	981	1,686	768	10,682	9,245	8,245	2,238	59,685
1978	1,161	1,313	2,082	1,983	5,242	2,563	2,131	1,897	1,209	1,635	1,082	11,185	8,301	8,707	2,166	60,057
1979	1,154	1,496	2,122	2,092	3,168	3,477	2,500	2,302	1,461	1,591	1,568	11,460	9,532	8,552	2,356	62,535
1980	1,012	1,435	2,114	1,787	1,662	2,514	1,656	2,055	1,936	1,577	1,622	11,773	9,900	8,597	2,168	59,538
1981	805	1,285	2,012	1,140	1,380	1,000	1,125	1,433	2,313	1,605	1,811	11,909	9,815	8,572	2,102	55,900
1982[2]	710	1,244	2,029	1,158	2,214	972	827	1,295	2,749	1,339	2,117	12,000	6,470	8,649	1,891	53,162
1983[1]	675	1,385	2,090	1,075	2,425	1,005	1,065	1,240	2,685	1,385	2,290	12,035	5,085	8,656	1,790	52,855

[1] Estimate. [2] Preliminary. *Source: Energy Information Administration* T.489

United States Crude Oil[1] Supply & Disposition

Yearly Average		Supply: Field Production: Total Domestic	Supply: Field Production: Alaskan	Supply: Imports: Total	Supply: Imports: SPR[4]	Supply: Imports: Other	Supply: Stock Withdrawal[3]: SPR[4]	Supply: Stock Withdrawal[3]: Other	Supply: Unaccounted for Crude Oil	Disposition: Refinery Inputs	Disposition: Exports	Ending Stocks[2]: Total	Ending Stocks[2]: SPR[5]	Ending Stocks[2]: Other Primary
		Thousands barrels per day										Million barrels		
1975		8,375	191	4,105		4,105		− 17	17	12,442	6	271		271
1976		8,132	173	5,287		5,287		− 39	77	13,416	8	285		285
1977		8,245	464	6,615	21	6,594	− 20	−150	− 6	14,602	50	348	7	340
1978		8,707	1,229	6,356	162	6,195	−163	84	− 57	14,739	158	376	67	309
1979		8,552	1,401	6,519	67	6,452	− 67	− 81	− 11	14,648	235	430	91	339
1980		8,597	1,617	5,263	44	5,219	− 45	− 52	34	13,481	287	466	108	358
1981		8,572	1,609	4,396	256	4,141	−336	46	83	12,470	228	594	230	363
1982		8,649	1,696	3,488	165	3,323	−174	38	71	11,774	236			
1983	January	8,634	1,698	2,938	219	2,720	−219	−348	238	11,070	117	661	301	361
	February	8,660	1,725	2,268	197	2,071	−197	−185	423	10,635	262	672	306	366
	March	8,677	1,726	2,232	201	2,031	−184	240	134	10,854	174	670	312	359
	April	8,686	1,710	3,154	205	2,949	−197	−241	191	11,436	88	684	318	366
	May	8,682	1,710	3,234	289	2,945	−293	362	148	11,789	280	681	327	355
	June	8,676	1,710	3,502	190	3,312	−188	25	480	12,287	144	686	332	354
	July	8,647	1,705	3,868	274	3,594	−264	382	− 74	12,347	145	683	341	342
	August	8,653	1,712	4,174	350	3,823	−358	−423	333	12,141	172	707	352	355
	September	8,666	1,722	4,221	309	3,912	−307	116	− 6	12,445	177	713	361	352
	October	8,654	1,731	3,446	202	3,244	−201	21	69	11,784	140	718	367	351
	November	8,624	1,713	3,312	171	3,141	−135	317	137	12,003	186	713	371	341
	December	8,612	1,713	3,214	193	3,021	−252	− 55	−141	11,217	95	722	379	343
	AVERAGE	8,656	1,715	3,303	234	3,069	−234	19	159	11,672	164			
1984	January	8,659	1,741	3,029	200	2,829	−173	−169	451	11,579	153	733	384	348
	February	8,726	1,740	2,952	R85	2,868	R− 96	R282	487	12,100	185	727	387	340
	March	*8,718*	*1,740*	*3,576*	*172*	*3,404*	*−149*	*234*	NA	*12,006*	NA	*724*	*392*	*332*
	April													

[1] Includes lease condensate. [2] Stocks are totals as of end of period. [3] A negative number indicates an increase in stocks and a positive number indicates a decrease. [4] Strategic Petroleum Reserve. [5] Stocks of Alaskan crude oil in transit were included beginning in January 1981. Stock withdrawals are calculated using new basis levels. *Source: Energy Information Administration* T.489a

Production[1] of Crude Petroleum in the United States In Millions of Barrels of 42 Gallons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	262.1	240.6	263.3	253.7	259.7	252.6	258.4	255.7	248.4	258.1	248.3	255.9	3,057
1976	255.2	238.7	255.2	242.3	251.9	242.8	251.9	251.4	244.5	250.0	242.4	249.9	2,976
1977	243.5	227.9	250.8	244.3	250.3	243.1	251.2	257.5	254.4	265.8	257.4	263.1	3,009
1978	259.2	234.5	270.3	264.5	273.6	265.0	271.4	271.5	264.0	273.4	262.2	268.5	3,178
1979	262.7	238.7	266.6	256.6	266.6	252.9	259.3	265.0	255.7	267.3	262.8	267.0	3,121
1980	268.9	252.4	269.6	260.5	267.7	256.6	265.0	260.8	258.6	264.5	254.9	266.8	3,146
1981	264.7	240.9	267.0	256.7	263.5	258.9	263.5	266.1	258.1	265.4	257.6	266.1	3,129
1982	263.8	243.7	268.7	257.7	269.2	259.4	268.4	267.6	261.0	269.7	260.9	266.5	3,157
1983[2]	267.7	242.5	269.0	260.0	269.2	260.3	268.0	268.2	260.0	268.3	258.7		
1984													

[1] Represents oil transported from producing properties, plus that remaining on properties & consumed on leases. [2] Preliminary. *Source: Bureau of Mines* T.500

PETROLEUM

Crude Petroleum Refinery Operations Ratio[1] In Percent of Capacity

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	85	85	83	82	83	86	89	89	89	85	87	88	86
1976	86	88	87	86	87	93	94	91	89	86	90	91	89
1977	89	93	90	89	89	91	91	90	91	89	89	88	90
1978	85	84	85	83	89	88	88	91	90	89	91	90	88
1979	86	84	83	84	84	86	87	86	84	83	84	85	85
1980	82	80	77	76	75	77	74	73	74	71	73	76	76
1981	72	71	68	66	67	68	67	71	68	67	68	69	69
1982	67	65	66	66	69	75	75	71	74	71	71	70	70
1983[2]	68	65	66	69	72	75	75	74	76	73	75		

[1] Based on the ratio of the daily average crude runs to stills to the rated capacity of refineries per day. [2] Preliminary. *Source: Bureau of Mines*

T.496

Production of Major Refined Petroleum Products in Continental U.S. In Millions of Barrels

Year	Asphalt[2]	Aviation Gasol	Fuel Oil Distillate	Fuel Oil Residual	Gasoline[4]	Petro-Chemical Feedstocks	Special Naphthas	Miscel. pdl's.	Jet Fuel	Kerosene	Liquified Gases[7] (For Fuel)	Lubricants	Liquefied Gases[3] Total	Liquefied Gases[3] at L.P.G.[5]	Liquefied Gases[3] at L.R.G.[6]
1974	164.2	15.9	974.0	390.5	2,337	134.8	33.5	25.2	305.1	56.9	81.6	70.7	571.3	447.9	123.3
1975	144.0	13.7	968.4	451.0	2,394	122.2	27.3	32.2	318.0	55.7	80.5	56.2	557.5	444.1	113.4
1976	139.7	13.3	1,070	504.0	2,517	164.4	32.6	47.2	335.8	55.7	84.2	61.8	561.9	437.4	124.6
1977	154.1	14.2	1,197	639.0	2,582	191.4	31.4	53.0	355.7	62.0	85.3	64.5	571.6	443.0	128.6
1978	172.9	13.9	1,156	608.6	2,631	223.1	36.7	47.0	353.9	56.3	87.5	69.5	561.1	431.5	129.5
1979	168.8	13.7	1,151	615.6	2,515	252.1	36.6	42.7	369.2	66.8	84.7	71.0	568.0	443.9	124.1
1980	141.2	12.8	974.1	578.4	2,394	254.6	36.5	38.5	365.6	50.1	87.0	65.1	561.8	440.9	120.8
1981	123.5	11.5	953.8	482.1	2,349				353.2	43.6		60.6	573.4	458.6	114.8
1982	119.4	8.9	951.3	390.4	2,322				357.0	42.0		51.6	557.5	459.0	98.5
1983[1]	140	10	960	325	2,340				375	38		54	460	360	100

[1] Estimated. [2] 5.5 barrels = 1 short ton. [3] Includes ethane & ethylene. [4] Finished. [5] Gas processing plants. [6] Refineries. [7] Liquefied refinery gases. *Source: Bureau of Mines*

T.490

Stocks of Petroleum & Products in the United States on January 1 In Millions of Barrels

Year	Crude Petroleum	Strategic Reserve	Refined Products Total	Asphalt[2]	Aviation Gasol.	Fuel Oil Distillate	Fuel Oil Residual	Finished Gasoline	Petro-Chemical Feedstocks	Jet Fuel	Kerosene	Liquefied Gases[3]	Lubricants	Road Oil	Wax[4]	Unfinished Oils (Net)[5]
1974	242.5		658.8	15.0	3.9	196.5	53.5	213.4	2.4	28.5	21.0	98.6	12.2	.8	1.0	99.2
1975	265.0		695.0	21.4	3.5	200.1	59.7	221.9	3.5	29.4	15.3	112.5	16.1	1.1	1.2	106.0
1976	271.4		747.9	22.8	3.0	208.8	74.1	238.0	2.9	30.4	15.6	125.1	14.3	.6	.9	106.4
1977	285.5		707.7	19.4	2.8	186.0	72.3	234.3	4.7	32.1	12.5	116.3	12.3	.2	.7	110.5
1978	347.7	7.5	842.5	18.7	3.0	250.3	90.0	260.7	3.9	34.5	18.1	136.3	12.1	.3	.6	113.2
1979	376.3	66.9	784.6	20.9	2.8	216.5	90.2	240.8	4.4	33.7	14.3	132.0	12.2	.3	.8	
1980	430.3	91.2	778.6	18.9	2.7	228.7	95.6	239.9	4.0	38.5	15.8	110.7	12.5	.3	.7	117.7
1981	482.9	107.8	745.3	18.8	2.3	205.4	91.5	213.5	5.9	42.4	11.4	128.0	13.6	.3	.5	
1982	593.8	230.3	712.5	19.6	2.7	191.5	78.0	206.2		41.1	11.0	134.7	14.3			176.8
1983[1]	643.6	293.8	628.3	15.9	2.3	178.6	66.2	196.8		36.8	10.4	94.0	12.5			158.0
1984[6]	710	375	630	16	2.4	160	55	198		46	10	120	12			

[1] Preliminary. [2] 5.5 bbls. = 1 s. ton. [3] Includes ethane & ethylene at plants & refineries. [4] 1 bbl. = 280 lbs. [5] And misc. products. [6] Estimate. *Source: Bureau of Mines*

T.493

Stocks of Crude Petroleum[1] in the United States at Beginning of Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1974	242.5	243.0	240.7	244.7	256.4	269.5	268.8	268.7	264.8	266.7	269.4	271.1
1975	265.0	270.5	276.8	280.0	281.9	281.0	276.1	264.2	256.6	259.4	269.6	271.0
1976	271.4	289.3	277.4	283.1	286.6	284.0	281.7	282.6	277.3	284.4	297.7	298.8
1977	285.5	294.1	291.5	299.5	318.9	328.8	333.7	335.3	338.9	334.1	343.2	350.3
1978	347.7	352.5	350.2	363.9	365.2	354.7	363.5	368.2	357.8	368.3	378.2	381.4
1979	376.3	375.2	380.5	399.2	402.9	403.2	414.4	403.0	412.2	415.1	436.0	438.6
1980	430.3	448.7	457.2	458.6	471.0	474.6	472.7	469.9	478.4	469.2	475.1	475.4
1981	482.9	486.4	494.2	513.8	531.7	543.8	547.8	559.0	546.7	555.2	578.0	588.5
1982	593.8	606.2	613.0	609.2	610.4	609.5	608.3	612.8	626.5	618.6	635.6	647.5
1983[2]	643.6	661.5	672.2	670.4	683.6	681.4	686.3	682.7	706.9	712.6	718.2	712.8

[1] Total gasoline-bearing in the U.S. [2] Preliminary. *Source: Bureau of Mines*

T.501

Exports[2] of Petroleum and Products from the United States In Thousands of Barrels[1]

Year	Crude	Refined Products											
		Total Refined	Finished Gasoline	Kerosene (Incl. Range Oil)	Fuel Oil		Lubricants		Wax	Coke	Asphalt	Liquified Gases	Misc. Oils
					Distillate	Residual	Grease	Oil					
1974	1,074	79,417	1,013	36	855	4,969	277	11,659	879	41,244	410	9,038	1,207
1975	2,146	74,282	850	52	267	5,342	265	8,846	607	37,253	320	9,488	1,124
1976	2,941	78,658	1,297	40	421	4,210	261	9,234	625	37,778	267	8,993	1,112
1977	18,255	70,333	725	23	519	2,305	256	9,388	734	37,393	223	6,483	1,339
1978	57,728	74,329	470	40	1,202	4,634	288	9,399	543	40,438	138	7,238	171
1979	85,707	86,149	155	25	1,079	3,266	279	8,275	836	53,270	181	5,414	163
1980	104,908	94,289	494	32	1,238	12,232	246	8,322	736	49,872	247	7,826	210
1981	83,200	133,900	700		1,900	43,200	7,000						
1982[3]	86,300	211,200											
1983[4]	50,000	190,000											

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[1] 42 gallons per barrel. [2] Includes shipments from Noncontiguous Territories. [3] Preliminary. [4] Estimate. *Source: Bureau of Mines* T.494

Imports[2] of Petroleum & Products into the United States In Thousands of Barrels (42 Gallons Per Barrel)

Year	Crude	Refined Products												
		Total Refined	Asphalt	Fuel Oil		Finished Gasoline	Jet Fuel	Kerosene	Liquified Pet. Gases	Lubricants	Petrochemical Feedstocks	Special Naphthas	Unfinished Oils	Wax
				Distillate	Residual									
1974	1,269,155	885,200	11,252	105,579	579,157	74,402	59,396	1,744	44,971	1,786	4,364	938	44,228	956
1975	1,498,181	672,197	4,956	56,678	446,528	67,249	48,523	1,073	40,727	1,335	2,061	43	12,985	684
1976	1,935,012	705,256	3,905	53,520	517,325	47,774	27,983	3,163	47,436	1,361	1,370	45	11,735	654
1977	2,397,468	767,925	1,483	90,504	492,581	78,434	27,117	6,869	58,927	3,270	4,954	972	11,239	—
1978	2,329,700	722,900	907	63,288	494,640	69,518	31,346	4,031	40,889	2,978	2,994	1,750	9,913	—
1979	2,400,900	685,600	1,448	70,489	420,144	66,006	28,566	3,298	62,576	3,441	3,934	3,480	21,372	0
1980	1,946,200	582,500	1,414	51,900	343,600	51,071	29,521	3,690	56,711	2,667	10.245	3,354	19,659	0
1981	1,654,200	534,200		63,100	292,100									
1982[1]	1,352,400	514,000		34,000	283,100									
1983[3]	1,200,000	480,000		50,000	240,000									

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[1] Preliminary. [2] Includes shipments to Noncontiguous Territories. [3] Estimate. *Source: Bureau of Mines* T.495

Average Price of Crude Petroleum at Wells[1] Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	178.4	201.7	201.7	201.7	201.7	201.7	224.4	225.2	225.4	236.2	231.0	223.0	211.8
1975	223.1	228.6	230.2	232.2	234.2	256.0	250.4	256.1	256.1	257.8	261.0	262.6	245.7
1976	263.3	242.3	242.5	245.0	246.0	248.1	254.3	254.3	254.3	264.4	264.4	264.4	253.6
1977	262.9	274.2	270.0	271.0	271.0	271.8	270.8	273.3	276.1	278.6	282.9	288.1	274.2
1978	288.8	289.7	293.4	294.3	295.5	298.9	301.9	302.7	305.7	307.5	310.5	312.4	300.1
1979	316.4	322.3	324.2	326.2	335.7	356.4	370.6	385.7	422.1	436.7	450.4	470.8	376.5
1980	513.6	515.1	522.8	533.9	540.1	549.0	551.4	566.8	571.3	579.6	600.6	632.8	556.4
1981	704.4	842.7	842.8	842.5	839.9	815.9	798.9	796.8	796.8	788.2	785.9	787.2	803.5
1982	787.2	770.3	744.8	717.9	717.8	718.2	718.4	718.4	718.3	735.3	733.6	720.0	733.4
1983	719.7	692.9	678.0	678.0	678.0	677.9	675.7	675.1	675.7	676.1	676.0	674.8	681.5
1984	676.0												

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[1] Buyers posted prices. *Source: Bureau of Labor Statistics* T.497

Average Wholesale Prices of Gasoline[1] (Regular Grade—Leaded) Index (Feb. 1973 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	136.7	147.0	161.4	172.1	177.3	188.5	196.6	196.1	197.4	196.2	186.7	184.9	178.4
1975	187.0	189.1	191.1	193.3	199.0	206.8	215.5	228.9	233.7	235.1	233.0	229.5	211.8
1976	227.3	226.4	221.7	219.1	220.6	229.2	239.4	243.2	245.0	244.7	243.8	242.2	233.6
1977	239.9	240.4	245.6	249.5	254.5	258.9	261.2	260.5	259.6	257.5	256.3	255.8	253.6
1978	255.1	252.8	252.0	253.0	255.5	260.5	266.4	271.3	275.1	278.1	277.5	282.7	265.0
1979	287.0	292.3	299.9	313.0	331.6	349.3	371.0	397.7	422.1	439.2	488.3	459.6	367.6
1980	481.1	517.5	560.4	585.4	595.5	598.6	601.1	602.9	599.6	591.5	590.8	596.1	576.7
1981	607.5	632.9	683.2	694.7	690.4	685.6	677.4	668.4	666.4	666.1	661.7	657.7	666.0
1982	651.7	642.3	621.1	578.6	555.7	582.7	628.8	636.3	628.4	617.2	608.7	598.5	612.5
1983	576.7	551.4	533.5	515.3	537.2	559.5	566.6	571.2	566.3	560.5	549.4	537.1	552.1
1984	519.6												

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[1] Excludes aviation. *Source: Bureau of Labor Statistics* (0571-02) T.498

PETROLEUM

High, Low & Closing Prices of December Crude Oil Futures in New York In Dollars Per Barrel

Year of Delivery	Year Prior to Delivery			Delivery Year											Life of Delivery Range
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	
1983 High		Futures Trading				28.90	30.82	30.58	31.25	31.85	32.21	31.54	30.78	30.55	32.21
Low		Began Mar. 30, 1983				28.60	28.85	29.30	29.80	30.68	31.47	30.15	29.55	29.92	28.60
Close						28.60	30.60	29.80	30.90	31.82	31.53	30.33	30.37	28.70	—
1984 High	—	29.75	29.55	29.60	30.50	30.56	30.42								
Low	—	28.60	27.50	28.20	28.85	30.06	30.15								
Close	—	29.00	28.20	29.15	30.03	30.35	30.15								

Source: N.Y. Mercantile Exchange T.502a

Month End Open Interest of Crude Oil Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983			1,481	3,158	4,436	5,128	5,140	6,742	10,314	11,786	19,351	21,554
1984	23,168	27,650	28,142	26,647								

Source: N.Y. Mercantile Exchange T.502b

Volume of Trading of Crude Oil Futures in New York In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1983			3.4	13.9	16.5	15.9	18.6	17.3	26.5	46.1	67.2	97.7	323.2
1984	108.7	130.7	121.5	106.2									

Source: N.Y. Mercantile Exchange T.502c

United States Production of Gasoline[1] In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	185.2	167.0	180.8	170.4	174.3	181.4	192.7	196.6	186.1	188.2	183.1	196.9	2,203
1972	192.6	175.2	184.9	176.8	188.6	189.1	206.7	206.2	199.8	204.6	194.9	200.7	2,320
1973	197.9	173.0	192.2	192.9	209.8	211.3	218.3	215.4	200.2	207.1	193.2	190.4	2,402
1974	184.2	168.2	186.5	190.5	197.7	201.4	212.2	213.0	195.6	197.8	190.1	200.1	2,338
1975	203.0	176.7	189.2	182.3	191.1	201.2	218.5	214.6	206.0	200.3	199.4	211.3	2,394
1976	201.8	188.6	201.2	197.8	211.1	220.6	223.9	223.3	207.8	208.1	209.3	223.5	2,517
1977	215.7	191.6	213.9	210.2	216.7	215.8	226.3	224.3	213.4	215.9	214.9	222.6	2,581
1978	215.8	186.5	210.1	201.2	220.1	217.8	226.6	232.7	223.4	223.6	228.7	243.9	2,631
1979	226.0	194.8	207.3	204.6	212.0	211.8	218.9	215.4	200.8	202.9	201.8	218.0	2,515
1980	217.5	200.2	203.4	189.5	196.8	198.1	201.8	201.4	192.4	191.2	194.9	206.9	2,394
1981	209.1	177.3	193.3	184.2	191.0	187.7	199.8	206.2	198.0	200.2	197.7	205.0	2,349
1982	191.8	165.7	186.5	183.4	196.7	203.5	210.7	200.1	196.5	194.9	188.9	203.2	2,322
1983[2]	187.3	164.3	183.4	186.7	198.7	200.3	208.8	203.8	198.4	192.7	199.8		
1984													

[1] Gasoline and naphtha from crude petroleum and natural gasoline used at refineries. [2] Preliminary. *Source: Bureau of Mines* T.502

U.S. Production of Residual Fuel Oil and Distillate Fuel Oils In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	105.5	95.8	101.3	90.6	88.5	89.3	91.2	95.5	93.3	96.7	97.5	109.3	1,155
1971	112.2	99.4	104.5	98.9	94.1	96.8	97.8	97.1	91.0	94.5	94.5	106.0	1,187
1972	107.4	104.9	105.3	96.6	100.9	98.6	99.4	101.1	100.1	107.6	108.4	126.1	1,256
1973	128.5	111.4	112.4	101.7	108.3	112.2	112.8	113.3	110.7	120.8	119.5	133.2	1,385
1974	122.5	96.0	97.3	105.2	114.7	114.3	119.3	117.0	107.6	117.8	120.9	132.1	1,365
1975	132.3	112.9	118.8	111.9	111.1	111.8	116.1	115.9	119.9	121.2	119.4	128.3	1,420
1976	128.7	126.3	127.2	118.2	123.9	123.8	131.1	133.3	128.3	134.8	142.8	155.8	1,574
1977	163.1	158.2	151.7	140.5	149.2	147.3	152.9	152.1	151.8	158.4	151.0	160.0	1,836
1978	153.0	133.0	147.8	135.2	152.0	140.4	146.0	152.7	144.7	150.8	150.9	158.5	1,765
1979	153.6	131.1	146.9	137.6	144.2	141.0	151.3	152.1	149.4	151.3	149.3	158.6	1,766
1980	148.3	131.6	128.4	121.6	123.5	126.6	129.3	121.1	125.4	127.2	128.5	141.0	1,552
1981	142.6	122.4	121.1	112.1	114.0	112.0	110.6	120.5	117.1	115.4	118.3	129.8	1,436
1982	118.6	101.1	105.7	105.7	116.2	114.1	116.7	107.6	110.0	117.6	115.5	112.9	1,342
1983[1]	100.7	83.8	87.5	93.3	104.6	101.3	104.5	102.9	106.1	107.9	105.9		
1984													

[1] Preliminary. *Source: Bureau of Mines*

T.505

United States Domestic Consumption of Gasoline In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	163.9	151.0	173.4	171.3	183.6	187.4	195.2	190.4	179.8	184.8	168.4	182.0	2,131
1971	164.6	154.6	182.6	187.6	184.5	195.1	201.0	197.0	183.6	188.6	184.6	189.3	2,213
1972	173.2	166.9	200.5	190.0	201.2	206.2	208.4	216.6	194.9	198.5	195.5	198.8	2,351
1973	190.9	181.5	203.2	197.5	215.7	210.3	218.9	226.9	198.7	208.6	206.0	194.5	2,453
1974	181.2	171.7	192.7	195.0	210.4	209.1	217.1	220.7	193.0	209.7	197.6	204.3	2,402
1975	193.4	171.7	197.1	202.7	214.1	213.5	219.7	218.6	203.2	211.5	192.8	212.0	2,450
1976	199.2	182.5	214.7	215.9	213.5	226.0	228.0	223.7	213.5	215.9	212.2	222.2	2,567
1977	201.4	194.1	215.3	221.5	219.1	229.3	232.3	231.4	220.8	222.1	216.8	229.5	2,634
1978	208.0	193.4	226.2	217.2	240.8	238.7	236.2	245.6	223.3	232.2	226.0	231.9	2,720
1979	212.5	203.9	225.2	212.7	224.8	216.5	215.9	228.8	207.8	218.8	205.0	209.5	2,582
1980	196.8	192.4	199.6	204.9	209.8	200.9	210.2	207.3	196.5	207.8	187.9	206.3	2,421
1981	200.1	177.1	196.4	199.1	205.9	212.0	212.7	206.9	200.6	204.9	191.9	207.9	2,416
1982	185.5	174.0	201.2	207.7	207.1	206.1	211.4	206.1	196.9	198.8	197.6	203.6	2,396
1983[1]	185.8	169.4	212.8	195.8	203.5	211.1	211.0	216.2	201.8	204.9	199.6		
1984													

[1] Preliminary. *Source: Bureau of Mines*

T.503

Stocks of Finished Gasoline on Hand in the United States, at End of Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	231.8	238.8	240.8	235.7	226.4	214.9	201.9	196.4	199.3	194.5	204.0	214.3
1971	237.0	250.5	250.6	235.0	226.2	214.0	207.2	208.4	212.3	212.9	213.6	223.8
1972	244.6	254.8	241.2	229.5	219.2	204.3	204.7	196.8	203.7	211.7	213.2	217.1
1973	226.0	220.0	211.1	208.2	205.3	211.6	215.0	208.6	213.9	218.2	211.4	213.4
1974	221.3	223.0	223.6	226.8	221.9	220.5	222.2	222.1	230.7	224.1	221.9	221.9
1975	228.3	245.9	255.4	252.1	235.7	217.0	210.0	215.2	218.4	229.2	224.5	235.3
1976	238.0	243.4	251.8	241.9	226.6	227.5	227.7	229.4	233.2	232.6	229.1	230.5
1977	234.3	255.5	258.1	264.7	261.5	265.3	259.1	260.9	259.6	258.7	258.0	261.5
1978	260.7	275.1	273.7	262.0	251.4	235.9	222.0	219.0	211.5	219.2	216.1	223.2
1979	260.0	255.4	242.7	239.3	231.0	234.2	244.1	235.2	232.3	221.0	223.3	239.9
1980	264.9	277.3	285.9	275.1	266.1	267.7	263.8	262.2	261.0	249.1	259.9	213.5
1981	229.1	232.4	234.5	225.2	214.8	196.1	187.9	190.9	193.4	193.1	203.3	206.2
1982	215.9	211.2	200.7	181.0	175.6	179.5	185.0	187.6	193.3	194.6	191.9	196.8
1983[1]	210.9	209.9	186.2	185.3	189.3	185.8	194.2	187.4	192.2	190.3	198.4	
1984												

[1] Preliminary. *Source: Bureau of Mines*

T.504

Plastics

Demand for most plastics improved during 1983 in the U.S., allowing producers to raise prices and recoup some of their 1982 losses. Housing, transportation, and construction typically account for nearly 23 percent of U.S. sales of plastics, and other markets include, in order of importance: consumer and institutional uses, electrical and electronics uses, furniture and furnishings, adhesives and inks and coatings and industrial machinery.

Industry shipments of plastics materials in 1983 were 10 percent higher, in 1972 dollars, than in 1982. Sales in 1982 were depressed by weak demand in domestic markets, especially demands for housing and autos. Demand from major end-use industries such as packaging, electrical/electronic, transportation and construction, increased steadily from the beginning of 1983. As a result, total production of plastic materials neared 42 billion pounds in 1983, 10 percent over 1982. Much of it was recovery of volume, lost in 1982 when production was off 6 percent.

Operating rates at production facilities improved. For example, the operating rate for acrylonitrile-butadiene-styrene (ABS) reached about 85 percent of effective capacity compared to about 60 percent in 1982; the polycarbonate operating rate increased to about 80 percent from under 70 percent in 1982; and the rate for polypropylene neared 90 percent. In some cases individual plants operated even closer to capacity. The closing of obsolete plants in some cases was the chief reason for improved rates. The higher operating rates did not stimulate large expenditures for new facilities and equipment. Although capital expenditures were substantial in past years, a current attitude of caution prevailed and they were not expected to reach the $904 million spent in 1981.

Employment in the capital intensive plastics materials industry, estimated at 54,000 in 1983, has varied little in recent years. Relatively few production workers are needed to operate the highly automated plants of the industry and the need remains about the same whether plants operate at 60 or 80 percent of capacity. Production workers account for about 62 percent of total industry employment.

The value of U.S. exports in 1983 fell an estimated 6 percent below the 1982 level, due partly to strong U.S. exchange rates and partly to continuing sluggish economic activity in many foreign markets. Although U.S. imports are estimated to have risen in 1983, they were not expected to reach even 2 percent of new supply.

European producers reported a state of overcapacity in their plastics industry and were considering a coordinated reduction in capacity. However, the high value of the U.S. dollar had helped the foreign plastics producers to displace U.S. sales in some markets. U.S. firms appeared to be reducing their operations abroad due to a weak raw material position. However, one exception was noted—a proposed joint venture between Hercules Inc. (U.S.) and Montedison (Europe). They planned to combine their polypropylene resin businesses and assets. The new company would use a new high-yield catalyst and the polymerization cost-cutting technology developed by Montedison and Mitsui of Japan.

In 1984, plastics materials shipments are expected to increase about 7 percent if the 1983 economic pace is maintained. The plastics industry is expected to outperform, or at least keep pace with, the overall economy. Recovery exceeding the record production level of 1979 is possible if sales of cars, homes, and large household goods increase as expected in 1984. As the recovery keeps plants operating at higher rates, profitability should improve. Investments in additional production capacity could become more attractive, provided interest rates remained moderate.

The so-called miscellaneous plastics products industry is a residual statistical concept that includes plastics products not consumed within the companies that produce them as well as products not reported in other industries. Miscellaneous plastics accounts for approximately half of the total U.S. consumption of plastics and resins, and the growth of these materials is primarily dependent upon growth in the automotive, construction, and packaging industries. The largest group in the miscellaneous category is unsupported film and sheeting, much of which goes into packaging products.

Plastics products are made from petrochemicals (plastics and resins) and are price sensitive to change in petroleum and natural gas costs. The producer price index for plastics materials more than tripled between 1972 and 1980, resulting in a doubling of the price index for plastics products. Since 1981, petroleum prices have moderated or declined and plastics products have responded with a 1.5 percent annual increase in the producer price index. Most U.S. trade data combine rubber and plastics products so that foreign trade in plastics products themselves cannot be precisely measured. No major changes occurred in 1983 and some modest increases may be expected in 1984.

World Production of Plastics and Resins[3] (Condensation, Polymerization, Etc.) In Thous. of Metric Tons

Year	Australia	Austria	Czechoslovakia	France	—Germany— East	—Germany— West	Italy	Japan	Netherlands	Poland	Belgium	Hungary	USSR	United Kingdom	United States
1976	407	404	580	1,769	679	7,088	2,266	4,952	1,723	559	824	186	3,216	2,556	13,261
1977	480	430	738	1,834	734	6,270	2,538	4,978	1,783	583	1,471	144	3,300	2,710	11,232
1978	522	434	810	1,885	762	6,703	2,466	5,882	1,962	596	1,682	209	3,516	2,621	12,380
1979	618	437	853	2,220	779	7,255	2,562	6,964	2,012	571	1,969	289	3,504	2,647	13,866
1980	709	487	894	2,052	859	6,710	2,464	6,422	1,975	667	1,835	324	3,636	2,260	12,418
1981	700	504	913	2,480	998	6,600	2,154	5,936	2,393	588	1,940	307	3,696	2,051	
1982[1]	715	454	961		989	6,275	2,142	5,986	2,502	600	2,023	322	4,057	1,978	
1983[2]		500	990		1,000	6,784	2,350	6,200	2,750	520	2,200	350	4,300	1,800	

[1] Preliminary. [2] Estimate. [3] Refers to production of thermoplastic & thermosetting resins & plastic materials obtained by chemical transformation of natural organic substances or by chemical synthesis. *Source: United Nations* T.506

Production of Important Synthetic Plastics & Resin Materials in the U.S. In Millions of Pounds

Year	Phenolic Resins	Polyethlene & Copolymers	Polypropylene	Polystyrene & Copolymers	Polyvinyl Chloride & Copolymers	Year	Phenolic Resins	Polyethlene & Copolymers	Polypropylene	Polyatyrene & Copolymers	Polyvinyl Chloride & Copolymers
1970	1,186	5,844	1,031	3,550	3,756	1977	1,797	10,100	2,706	5,203	5,267
1971	1,181	6,381	1,339	3,990	4,103	1978	1,926	11,359	3,055	5,989	5,878
1972	1,441	7,656	1,731	4,890	4,322	1979	1,779	12,408	3,824	6,327	6,211
1973	1,648	8,582	2,165	5,156	4,594	1980	1,745	11,720	3,699	5,540	5,485
1974	1,598	8,826	2,249	5,060	4,744	1981	1,688	12,604	4,008	5,915	5,618
1975	1,275	7,483	1,903	3,877	3,695	1982	1,398	12,548	3,515	5,609	5,397
1976	1,305	8,775	2,551	4,743	4,545	1983[1]	1,400	13,900	4,000	6,000	5,600

Note: Data included in the table does not cover all Plastics production. Various types of Plastics production of lesser importance are not included because statistics are not available on a consistent basis. Also, many individual firms do not make their production figures known. [1] Preliminary. *Sources: U.S. Tariff Commission, Bureau of Census* T.507

Average Wholesale Price Index of Plastic Materials in the United States—1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
					Plastic Resins and Materials (066)								
1979	204.2	206.3	210.9	220.6	228.5	230.1	244.5	250.1	252.0	260.0	261.4	262.5	235.9
1980	270.4	272.1	274.5	287.6	288.4	287.6	285.7	281.5	276.5	276.1	276.2	274.1	279.2
1981	274.7	276.1	279.4	285.1	287.9	290.0	295.9	297.5	296.8	299.5	293.2	294.2	289.2
1982	286.1	297.3	285.5	286.0	283.2	282.1	280.9	282.2	281.6	281.6	281.4	281.4	284.1
1983	283.8	283.1	282.1	285.4	288.0	289.1	291.3	293.7	302.6	299.1	296.6	298.3	291.1
1984	304.2	305.0											
					PE Resin, Low, Pkg. Firm (0662-0301.99)								
1976	178.2	178.4	178.6	190.7	191.5	192.2	193.3	193.2	190.9	189.7	189.9	190.1	188.1
1977	187.7	185.2	189.5	197.7	197.1	196.9	194.8	194.8	194.0	195.2	195.6	195.2	193.6
1978	196.1	196.1	197.0	198.0	198.6	198.0	194.4	190.3	189.3	187.2	184.1	184.1	192.8
1979	186.6	186.9	186.9	203.3	210.1	213.2	225.2	225.0	225.8	243.2	247.0	249.0	216.9
1980	257.2	260.9	N.A.	275.1	270.8	264.0	259.4	254.4	249.4	249.3	251.8	250.9	258.5
1981	251.5	251.2	252.5	263.0	263.0	263.7	280.7	N.A.	279.8	279.9	N.A.	247.3	263.3
1982	207.5	208.1	209.7	224.5	202.1	197.2	184.3	185.3	184.2	183.9	184.7	184.7	196.4
1983	204.9	205.2	193.9	215.4	215.4	N.A.	236.2	236.2	237.8	251.6	250.9	250.9	227.1
1984	272.6	272.6											
					Thermoplastic Resins (0662) — Dec. 1980 = 100								
1981	100.2	101.0	102.6	104.6	105.8	106.6	109.3	110.1	109.7	110.5	107.2	107.6	106.3
1982	103.5	104.2	103.2	103.5	102.1	101.5	100.9	101.5	101.3	101.3	101.3	101.1	102.1
1983	102.4	102.1	101.5	103.4	104.7	105.2	106.3	107.3	107.0	109.6	108.5	109.2	105.6
1984	111.8	112.0											
					Polystyrene Resin, Rubber Modified (0662-0602.99)								
1976	165.7	174.4	173.2	175.4	176.1	174.9	175.4	174.4	165.7	162.8	162.3	162.5	170.3
1977	162.5	162.1	161.6	157.1	157.2	158.8	161.9	161.7	162.8	163.2	164.4	164.6	161.5
1978	164.6	164.6	164.6	168.3	170.2	N.A.	171.6	171.6	172.7	171.7	171.7	172.1	169.4
1979	180.8	N.A.	N.A.	200.8	213.7	N.A.	220.9	236.7	272.9	272.6	273.3	274.9	238.5
1980	283.5	N.A.	278.8	291.4	291.9	293.2	288.0	287.6	282.1	286.0	287.3	289.4	287.2
1981	290.2	294.2	291.7	299.2	299.2	305.2	303.1	N.A.	N.A.	292.6	298.9	299.7	297.4
1982	297.8	297.8	297.8	N.A.	294.2	293.9	291.2	291.2	291.2	N.A.	291.0	290.9	293.7
1983	299.6	287.8	287.8	287.8	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	290.8
1984	N.A.	N.A.											
					Thermosetting Resins (0663)—Dec. 1980 = 100								
1981	101.4	101.1	101.4	104.0	104.5	105.4	106.6	106.5	106.6	107.7	107.6	108.2	105.1
1982	108.0	107.9	108.1	108.1	108.0	108.6	108.7	108.8	108.9	108.8	108.9	109.2	108.4
1983	109.0	108.8	108.9	108.5	108.4	108.6	108.7	109.4	110.1	110.8	110.2	110.9	109.4
1984	112.2	112.6											
					Phenolic Molding Compound (0663-0201.99)								
1976	187.9	187.9	187.9	187.9	187.9	187.9	191.2	195.2	198.6	202.0	202.0	202.0	193.2
1977	202.0	202.0	202.0	205.4	205.4	202.0	202.0	202.0	202.0	202.0	202.0	203.8	202.7
1978	202.0	194.6	195.1	195.1	195.1	195.1	195.1	195.1	192.8	184.9	185.5	185.5	193.0
1979	185.5	185.5	200.3	221.6	230.2	230.2	234.9	233.9	236.0	239.7	242.5	239.7	223.3
1980	239.7	239.7	244.3	249.9	251.3	251.3	250.4	240.2	240.2	240.2	240.2	240.2	244.0
1981	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	254.2	254.2	254.2	254.2	254.2	254.2	254.2
1982	254.2	254.2	254.2	254.2	254.6	254.6	254.6	254.5	254.5	254.5	254.5	254.5	254.4
1983	249.6	245.7	245.7	245.7	245.7	245.7	245.7	245.9	246.0	246.0	245.6	245.6	246.1
1984	245.6	245.8											

Source: Bureau of Labor Statistics T.508

Platinum-Group Metals

The platinum group consists of six related metals which frequently occur together and are among the scarcest of the metallic elements. These metals are: platinum and palladium (by far the most important), rhodium, ruthenium, iridium, and osmium.

World production of platinum-group metals in 1983 was slightly lower than in 1982, with the USSR and the Republic of South Africa accounting for about 94 percent of total estimated output, according to preliminary U.S. Bureau of Mines data. U.S. primary production of platinum-group metals is insignificant, being derived as a byproduct of copper refining. Secondary material (excluding toll-refined metal which reportedly amounted to over 1.0 million ounces) refined in the U.S. was 25 percent lower than in 1982. Platinum recovery was 37 percent below a year earlier and palladium recovery was 6 percent lower than in 1982.

The U.S. net import reliance on platinum-group metals in 1983 was about 84 percent of apparent consumption vs. 80 percent in 1982. The U.S. usually consumes about one-third of world mine production and imports virtually all of its supply of primary platinum-group metals. U.S. imports for consumption increased 29 percent in 1983, paced by a 46 percent increase in platinum sponge (an imperfectly consolidated metal, the end product of chemical refining), 61 percent of which came from the Republic of South Africa and 21 percent from the United Kingdom. Palladium imports from all sources in 1983 were 18 percent larger than in 1982, despite reports of reduced sales to the U.S. by the USSR. Bureau of Mines data showed that imports of unwrought palladium totaled 348,587 troy ounces, off only 1 percent from the 1982 total, while imports of Soviet semi-manufactured palladium rose 56 percent, to 40,653 ounces. In 1983, the Republic of South Africa accounted for 33 percent of U.S. palladium imports and the USSR 28 percent. The Republic of South Africa produces about two-thirds of world platinum output and the USSR about two-thirds of the world's palladium output.

The platinum-group metals are refractory, chemically inert toward a wide variety of materials, even at high temperatures, and display excellent catalytic activity. These properties are the basis for the principal uses, as catalysts in the chemical, petroleum refining, and automotive industries, and as corrosion-resistant materials in the chemical, electrical, glass, and dental-medical industries. The United States and Japan consume around two-thirds of the world's platinum-group metals, with Western Europe and the USSR accounting for most of the remainder. In Japan, more than one-half of the platinum consumed goes into jewelry, while its use in automotive catalytic converters is the most important use in the U.S.

The 1.80 million troy ounces of platinum-group metals sold to consuming industries in the U.S. in 1983 were 3 percent less than in 1982. Palladium made up 46 percent of the total; platinum—44 percent; ruthenium—8 percent; rhodium—2 percent; and iridium and osmium less than 1.0 percent each. Platinum sales increased 1 percent in 1983, to 789,295 ounces. The 508,543 ounces of platinum sold to the auto industry represented 64 percent of total platinum sales in 1983; The electrical industry—nearly 9 percent; chemicals—8 percent; petroleum close to 5 percent; glass—about 2 percent; jewelry—1 percent; and miscellaneous uses—nearly 9 percent. Palladium sales to consuming industries in the U.S. in 1983 were 11 percent lower than in 1982, at 825,288 ounces. Dental and medical uses accounted for 34 percent of the total; electrical—26 percent; auto—21 percent; petroleum—7 percent; and chemical industry—5 percent.

Total stocks of platinum-group metals held by refiners, importers, and dealers in the U.S. at the end of December 1983 totaled 899,044 troy ounces, 19 percent below December 31, 1982 stocks. Stocks of platinum, at 427,666 ounces, were 29 percent lower than a year earlier; and stocks of palladium, at 376,104 ounces, were 2 percent lower than at the end of 1982.

As of November 30, 1983, the National Defense Stockpile contained 440,000 ounces of stockpile-grade platinum vs. a goal of 1.310 million; 1.253 million ounces of palladium vs. a goal of 3.000 million and 25,000 ounces of iridium vs. a goal of 98,000.

The producer price for platinum remained at $475 per troy ounce throughout 1983, but the dealer price dropped from a monthly average of $465 in February to a low of $385 in November, to average $424 for 1983 vs. $327 for 1982. The producer price for palladium remained at $130 throughout most of 1983. However, the dealer price advanced from a monthly average low of $102 in March 1983 to the year's high of $164 in December. The dealer average price for 1983 was $136 per ounce vs. $67 in 1982.

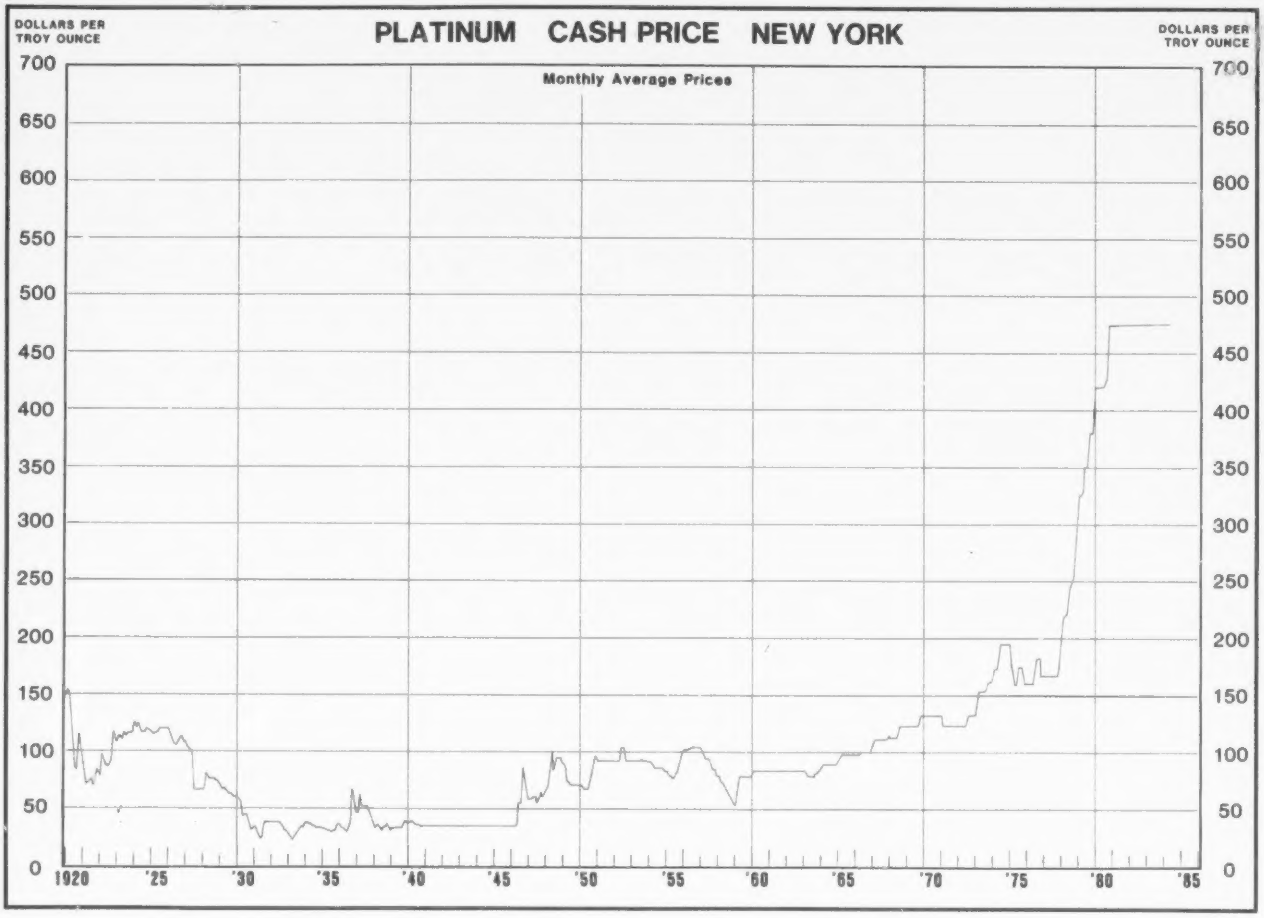
Futures Market

Both platinum and palladium futures are traded on the New York Mercantile Exchange (NYMEX).

World Production of Platinum-Group Metals In Troy Ounces

Year	Australia	Philippines	Finland	Canada	Colombia[3]	Ethiopia	Japan	South Africa	USSR	United States	Yugoslavia	World Total[1]
1975	1,830	1,415	600	399,218	22,114	162	19,401	2,600,000	2,650,000	18,920		5,713,660
1976	11,570	—	600	416,821	16,779	145	26,795	2,700,000	3,050,000	6,116	N.A.	6,228,826
1977	13,503		640	465,371	17,315	100	32,453	2,870,000	3,100,000	5,545	5,690	6,510,617
1978	20,653		640	346,213	13,939	123	34,397	2,860,000	3,150,000	8,246	5,979	6,440,190
1979	9,845		1,643	197,943	12,933	108	34,637	3,017,000	3,200,000	7,300	5,916	6,487,325
1980	12,753		900	410,757	14,345	113	41,334	3,100,000	3,250,000	3,348	4,919	6,838,469
1981[2]	15,122		3,601	382,658	14,801	125	36,269	3,110,000	3,350,000	7,318	3,601	6,923,495
1982[1]	14,030		3,600	269,800	12,000	125	43,273	2,600,000	3,500,000	8,033	3,480	6,454,341
1983[1]				300,000				2,600,000	3,600,000	8,000		6,600,000

[1] Estimate. [2] Preliminary. [3] Placer platinum. *Source: Bureau of Mines* T.509



PLATINUM CASH PRICE NEW YORK

Monthly Average Prices

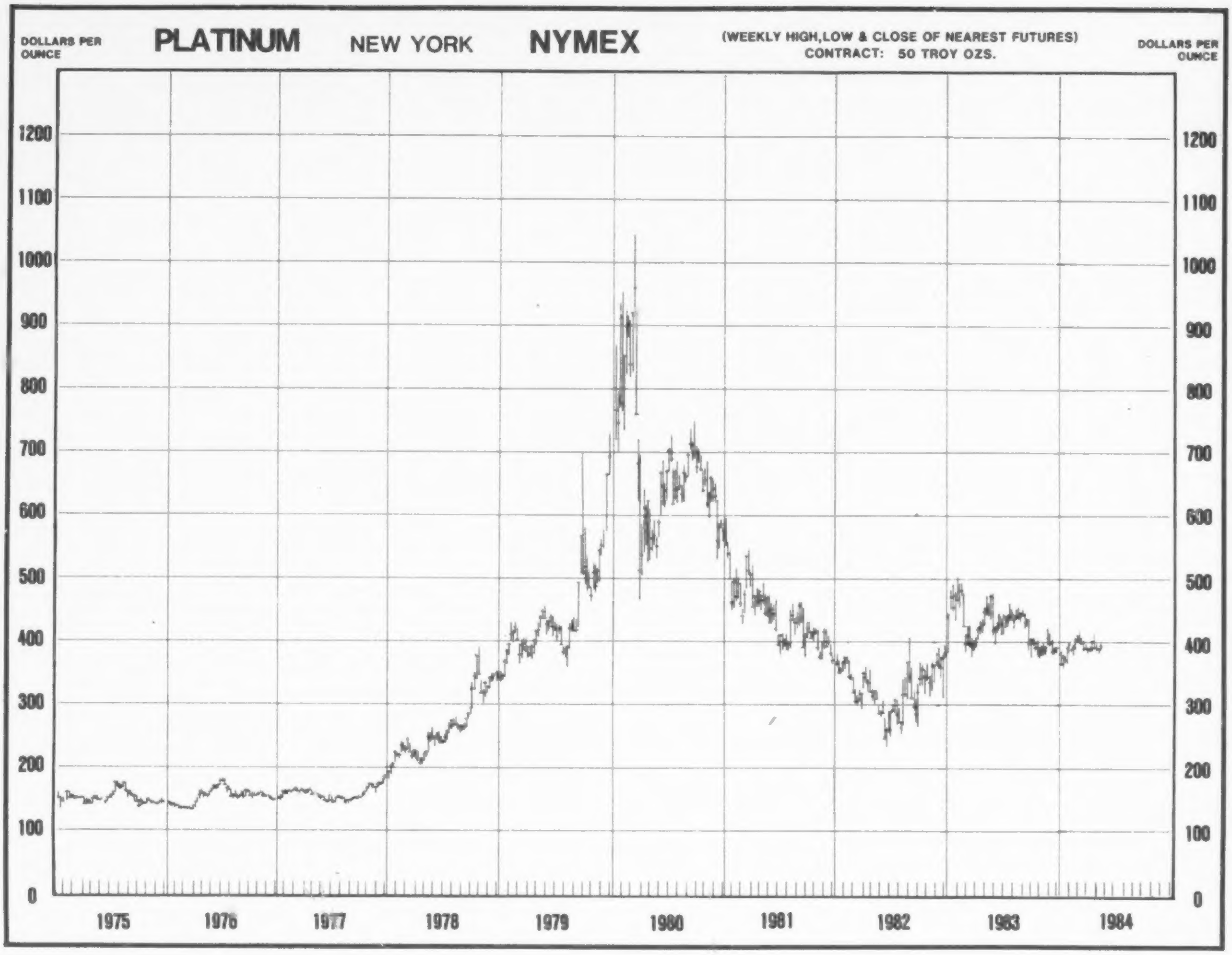
Average Producer Prices of Platinum in New York In Dollars Per Troy Ounce

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	129.00	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	123.04
1972	122.50	122.50	122.50	122.50	122.50	122.50	128.00	132.50	132.50	132.50	132.50	132.50	127.13
1973	132.50	141.97	152.50	152.50	152.50	152.50	152.50	152.50	155.24	160.50	160.50	160.50	152.18
1974	162.68	172.50	172.50	172.50	174.55	195.00	195.00	195.00	195.00	195.00	195.00	195.00	184.98
1975	195.00	180.53	175.00	163.06	160.00	160.00	162.73	175.00	175.00	172.17	160.00	160.00	169.87
1976	160.00	160.00	160.00	160.00	160.00	163.54	175.60	182.50	182.50	182.50	167.00	167.00	168.39
1977	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.65	174.81	167.71
1978	186.55	206.58	217.07	220.00	220.00	227.73	237.89	241.74	250.23	253.18	284.00	300.00	237.08
1979	303.41	325.00	325.00	327.38	350.00	350.00	350.00	357.83	380.00	380.00	380.00	393.33	351.83
1980	420.00	420.00	420.00	420.00	420.00	420.00	420.00	425.24	475.00	475.00	475.00	475.00	436.77
1981	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00
1982	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00
1983	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00
1984	475.00	475.00	475.00	475.00									

Source: American Metal Market

T.511

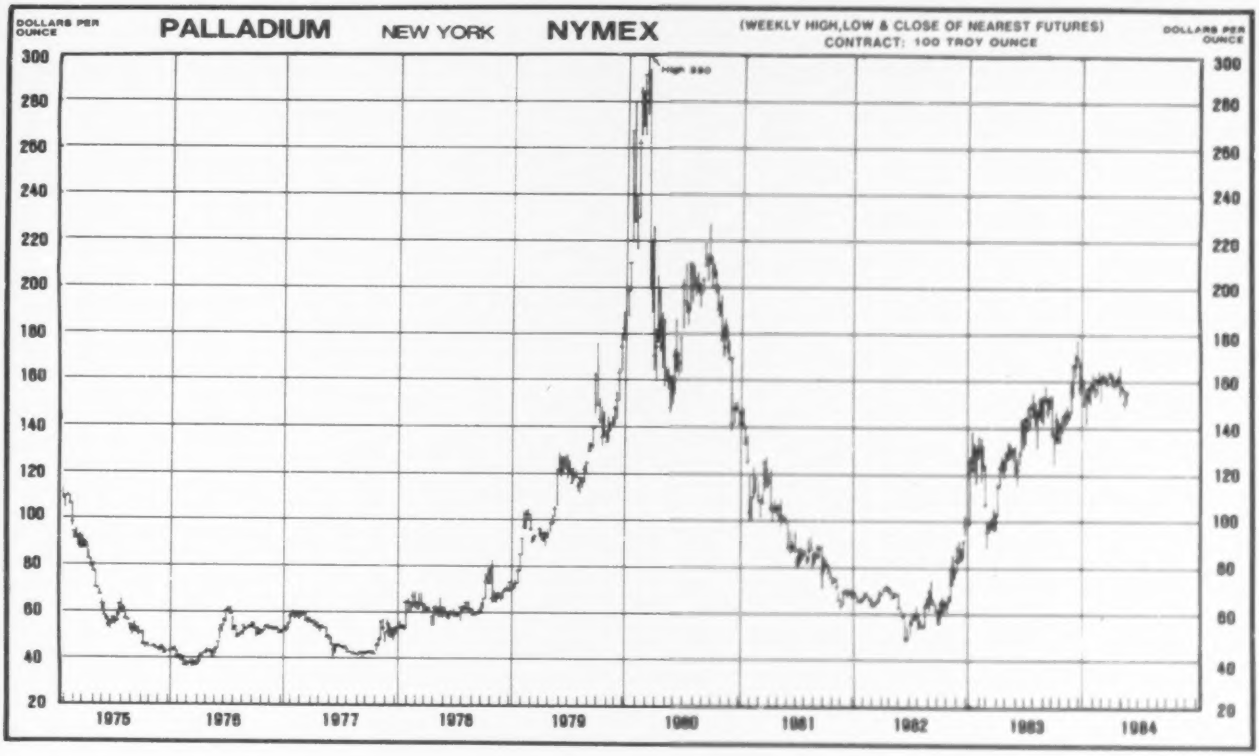
PLATINUM-GROUP METALS



Platinum-Group Metals Sold to Consuming Industries in the United States In Thousands of Troy Ounces

	— Automotive —		— Chemical —		— Electrical —		Dental & — Medical —		Jewelry & — Decorative —		— Petroleum —		—All Platinum-Group Metals—			
Year	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Palladium	Other[2] Metals	Total
1971			135.1	253.8	51.9	447.6	23.1	63.1	18.6	30.6	141.8	3.5	426.7	760.1	74.5	1,261.3
1972			225.9	363.5	92.4	443.5	30.5	95.5	20.7	29.3	98.8	31.4	545.3	876.0	140.9	1,562.2
1973			239.0	334.1	117.4	551.1	27.9	136.3	22.4	38.9	123.6	20.3	658.5	1,012.5	160.9	1,833.9
1974	350.0	15.0	350.0	150.0	98.6	452.6	25.5	125.7	23.0	35.3	139.5	26.7	943.7	886.1	151.2	1,981.0
1975	273.0	97.0	148.8	166.9	73.6	153.1	17.1	115.9	22.9	29.5	108.0	5.4	698.6	541.5	68.6	1,308.7
1976	481.0	194.9	83.6	154.7	89.3	197.5	26.9	140.4	23.4	14.8	59.1	7.7	851.1	657.1	94.9	1,603.1
1977	354.3	125.9	84.4	196.6	90.2	254.5	27.1	113.9	34.7	22.1	74.8	13.6	789.8	700.5	102.0	1,592.3
1978	597.5	201.8	149.7	186.5	106.4	346.5	44.1	208.0	25.8	25.1	108.4	19.2	1,196.3	917.9	145.4	2,259.6
1979	803.2	248.3	98.6	264.9	115.8	457.4	27.1	244.9	27.7	21.6	170.0	27.9	1,408.9	1,132.6	214.5	2,756.0
1980	517.1	214.2	119.0	165.6	150.1	376.1	25.8	245.4	51.0	22.6	144.0	26.7	1,118.2	912.0	175.7	2,205.9
1981	446.7	160.6	78.1	152.4	111.7	388.3	18.7	255.8	27.6	19.6	88.3	22.9	872.6	889.2	158.8	1,920.7
1982[1]	477.8	144.8	63.6	200.6	90.0	348.4	22.8	312.1	16.0	12.7	21.6	21.7	780.1	926.3	148.5	1,854.9
1983[3]													789.3	825.3	187.7	1,802.3

[1] Preliminary. [2] Palladium, iridium, osmium, rhodium, & ruthenium. [3] Estimate. *Source: Bureau of Mines* T.512



Average Dealer[1] Price of Palladium in the United States In Dollars Per Troy Ounce

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	124.32	105.00	93.92	90.50	73.27	57.71	55.86	58.30	50.52	47.60	44.00	44.00	70.42
1976	42.00	39.62	37.56	38.50	41.58	48.50	55.75	50.28	53.25	52.99	59.20	52.38	47.63
1977	54.06	58.10	57.82	55.20	52.97	45.18	44.90	42.36	42.20	43.07	48.83	51.97	49.72
1978	55.10	64.86	64.18	59.33	60.82	60.42	59.53	61.86	60.09	71.58	70.74	73.25	63.48
1979	76.14	103.35	95.56	93.97	105.53	124.33	121.40	117.45	136.94	143.63	141.95	163.42	118.62
1980	220.00	262.80	259.83	194.79	169.74	169.56	199.55	203.88	212.74	204.72	185.85	155.69	203.10
1981	134.38	112.18	117.82	110.42	102.90	94.76	83.61	85.86	85.50	79.08	72.13	69.51	95.68
1982[2]	67.00	67.53	66.99	69.43	68.51	59.27	57.35	57.76	64.50	59.99	74.03	86.14	66.60

[1] Based on wholesale quantities, prompt delivery. [2] Estimate. *Source: American Metal Market* T.510

Salient Statistics of Platinum and Allied Metals in the U.S. In Troy Ounces

Year	Net Import Reliance as a % of Apparent Consump.	Production Crude[5]	Refinery New Metal	Refinery Secondary Metal	Stocks as of Dec. 31[1] Platinum	Stocks as of Dec. 31[1] Palladium	Stocks as of Dec. 31[1] Other	Stocks as of Dec. 31[1] Total	Imports for Consumption	Value of Imports Mil. $	Exports Platinum	Exports Other Groups[3]	Exports Other[6]
1975	83	18,920	16,571	270,101	420,770	335,621	92,819	849,210	1,820,284	272.8	284,796	283,435	91,654
1976	90	6,116	7,101	215,355	536,318	459,765	89,620	1,085,703	2,667,059	291.5	138,951	186,602	186,854
1977	91	5,545	5,199	195,219	438,045	475,358	99,409	1,012,812	2,510,374	273.0	149,023	137,324	140,284
1978	90	8,246	8,303	257,191	369,823	369,937	121,651	861,411	2,921,411	450.2	166,095	356,990	179,462
1979	89	7,300	8,392	309,022	305,605	323,865	131,812	761,282	3,479,128	840.5	207,832	522,195	189,218
1980	88	3,348	2,300	330,923	502,185	353,002	118,074	973,261	3,501,782	1,177	289,454	302,457	173,053
1981	84	7,318	5,607	391,637	401,389	398,933	117,856	918,178	2,849,617	800.3	391,194	258,745	213,426
1982[2]	80	8,033	7,078	343,020	604,632	384,184	117,812	1,106,628	2,493,706	553.9	175,805	262,764	423,576
1983[4]	84	8,000	7,000	257,820	427,666	376,104	95,274	899,044	3,218,022	752.8	184,599	261,188	782,967

[1] In hands of refiners, importers, & dealers. [2] Preliminary. [3] Palladium, rhodium, iridium, osmium, ruthenium & osmium metals & alloys. [4] Estimate. [5] From crude platinum placers & byproduct platinum-group metals. [6] Ore & concentrates, waste, scrap & sweepings. *Source: Bureau of Mines* T.513

High, Low & Closing Prices of April Platinum Futures in New York In Dollars per Ounce

Year of Delivery		Year Prior to Delivery										Delivery Year				Life of Delivery Range
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
1978	High	178.4	180.3	175.0	169.7	163.2	160.3	158.3	160.8	176.3	179.2	190.0	224.8	239.5	247.2	226.0	247.2
	Low	171.0	169.0	166.2	159.6	152.5	154.5	148.5	152.8	156.4	162.3	174.3	186.6	211.6	212.0	208.9	148.5
	Close	255.0	263.0	241.5	263.5	261.3	277.4	284.3	292.5	390.0	371.6	358.0	393.0	430.5	413.2	398.0	430.5
1979	High	229.0	228.3	212.8	217.9	238.0	244.5	260.0	261.5	288.0	302.0	325.0	342.5	378.1	365.0	371.0	173.6
	Low	177.5	174.3	168.0	162.7	159.4	156.4	153.4	159.0	174.4	176.5	189.2	219.0	230.3	225.8	210.0	—
	Close	246.3	241.8	219.8	258.6	247.6	277.4	264.2	289.9	381.6	324.2	354.6	384.7	414.6	385.0	397.0	—
1980	High	438.0	421.5	409.5	458.3	446.0	429.0	434.0	573.6	608.6	550.0	715.3	974.4	960.0	1,045.0	642.0	1,045.0
	Low	388.5	370.0	369.0	402.0	410.0	382.0	368.0	417.0	468.5	467.0	537.0	715.0	827.0	465.0	525.0	270.1
	Close	423.2	390.1	409.5	451.0	426.9	388.8	428.0	573.6	485.5	546.0	692.6	832.0	920.1	560.0	602.0	—
1981	High	1,100.1	1,190.0	738.0	624.8	753.5	785.0	720.0	810.0	755.5	714.0	680.5	621.0	518.0	546.0	523.0	1,190.0
	Low	972.0	623.5	623.5	563.8	646.0	653.7	660.0	710.0	673.0	622.0	561.0	452.2	455.0	430.0	443.5	430.0
	Close	1,070.0	663.5	626.0	624.8	740.7	676.0	707.2	742.8	681.8	673.4	606.0	463.5	461.7	500.3	461.0	—
1982	High	595.0	624.7	594.5	551.0	533.0	460.6	488.5	494.0	462.5	434.5	434.0	392.5	380.0	346.5	364.0	624.7
	Low	535.7	507.0	507.0	502.0	447.0	425.5	418.7	407.0	424.0	381.0	376.0	352.5	342.0	296.5	311.5	296.5
	Close	540.2	577.1	529.9	528.0	455.5	438.7	460.7	435.4	429.8	405.0	384.1	368.2	344.3	318.3	332.2	—
1983	High	429.6	390.0	400.0	356.0	329.5	333.0	358.1	415.0	392.0	385.0	405.0	499.3	502.0	428.0	433.0	502.0
	Low	388.0	342.6	352.0	318.0	263.0	280.5	271.5	291.0	285.2	320.0	352.0	393.0	396.3	376.5	393.0	263.0
	Close	395.0	357.2	352.0	315.2	306.4	303.3	333.1	294.4	355.1	384.3	392.6	498.7	396.3	392.6	424.0	—
1984	High	526.0	461.0	459.5	495.0	465.0	474.0	470.0	464.5	421.0	426.0	422.0	398.5	410.0	417.5	407.2	528.0
	Low	423.3	410.0	433.5	458.0	422.0	439.0	439.5	404.0	382.0	380.0	389.5	369.0	382.0	388.0	384.0	364.3
	Close	423.3	425.6	453.4	468.5	441.5	457.7	453.6	415.8	383.0	417.2	399.5	391.3	403.8	392.2	397.0	—
1985	High	438.5	447.5	440.0													
	Low	415.0	422.0	414.0													
	Close	433.5	426.0	417.4													

Source: N.Y. Mercantile Exchange T.514

Month-End Open Interest of Platinum Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	7,408	8,703	6,856	6,941	10,289	7,748	8,120	8,278	8,466	8,373	8,816	9,230
1979	8,755	9,866	9,302	9,088	8,861	9,683	10,856	9,850	8,563	7,525	7,595	8,926
1980	8,200	8,409	6,209	5,434	6,369	7,943	7,797	8,286	14,239	12,140	12,026	11,911
1981	9,410	8,946	9,441	7,709	8,130	7,891	5,520	6,446	8,421	7,055	8,601	7,839
1982	6,278	7,524	8,686	8,302	10,326	9,337	11,137	12,853	14,141	13,002	15,547	15,620
1983	19,927	23,506	15,197	15,878	18,375	15,918	16,934	15,671	15,413	12,450	13,227	13,384
1984	12,692	13,912	13,805	15,244								
1985												

Source: N.Y. Mercantile Exchange T.515

Volume of Trading of Platinum Futures in New York In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	28.3	35.9	48.9	27.2	38.5	33.9	26.0	34.5	28.1	39.0	33.1	32.5	405.7
1979	43.8	45.4	43.4	42.1	45.2	50.8	47.6	56.0	48.4	35.0	38.2	40.1	536.1
1980	35.2	28.5	41.7	21.4	26.6	37.6	40.8	26.7	59.7	41.0	34.8	35.9	429.7
1981	36.5	29.7	56.1	36.7	30.8	44.7	37.9	39.1	63.9	35.4	33.2	46.6	490.5
1982	32.5	29.5	48.4	42.4	33.1	46.6	55.8	76.9	84.8	70.8	70.0	78.1	669.0
1983	126.0	117.0	107.9	71.9	106.2	115.4	75.9	77.0	79.2	61.5	57.2	40.0	1,035.4
1984	44.7	43.7	68.9	54.1									
1985													

Source: N.Y. Mercantile Exchange T.516

Pork Bellies

Pork bellies, the layer of meat and fat from the underside of the hog, are cured and smoked to produce bacon. An average hog will yield two bellies, each weighing from about 8 to 18 pounds depending on the size of the animal when slaughtered. The bellies account for approximately 12 percent of a hog's live weight and a somewhat larger percentage of the total "cut-out" value. Profit margins for the hog producer reflect the total value of all pork products, including hams and loins as well as bacon, and even when the overall cutout value is profitable, the price of any one of these cuts may be independently weak.

Prices for pork bellies were generally weak during the first half of 1983 because of increasingly large movements of bellies into cold storage. The USDA reported that total cold storage stocks of pork bellies in U.S. warehouses as of the end of December 1983 totaled 78.6 million pounds compared with only 31.3 million in all cold storage warehouses as of the end of December 1982. The build-up of cold storage holdings of bellies continued through the first quarter of 1984. Cold storage stocks of bellies in all warehouses as of March 31, 1984 totaled 95.1 million pounds, nearly 21 percent larger than end-of-1983 cold storage stocks.

The wholesale price for 12–14 lb. pork bellies, Midwest, averaged 60.58¢ per lb. in 1983 compared with 76.54¢ in 1982 and 52.29¢ per lb. in 1981.

Total (retail and commercial) production of sliced bacon under federal inspection in 1983 totaled 1,676.4 million pounds compared with 1,501.5 million pounds sliced in 1982.

U.S. commercial pork production totaled nearly 15.1 billion pounds in 1983, 7 percent greater than the 14.1 billion pounds produced in 1982. First quarter of 1984 pork production was projected at 3.8 billion pounds, up 8 percent from a year earlier. The average dressed weight was estimated at 172 pounds, or near year-earlier levels. However, it was not thought that producers would hold back as many sows in 1984 as in the previous year, and therefore 1984 hog slaughter was projected as being higher than anticipated at the end of 1983. Commercial production of pork in the second quarter of 1984 was expected to be about 3.6 billion pounds, down 5 percent from a year earlier. Because of high feed costs, the average dressed weight of a hog was expected to average 1 to 3 pounds lighter than the average of 174 pounds recorded in the spring of 1983. Expectations of a 14 percent drop in summer 1984 slaughter compared to the summer of 1983 were based upon the 10 percent reduction in the March 1, 1984 inventory of hogs weighing under 60 pounds in the 10 quarterly reporting states.

Futures Market

Pork belly futures are traded on the Chicago Mercantile Exchange.

United States Quarterly Sliced Bacon Production[1] In Millions of Pounds

Year	Retail	Commercial	Total	Year	Retail	Commercial	Total
1981	1,086.8	520.5	1,607.3	1983	1,113.6	562.8	1,676.4
I	266.3	124.1	390.4	I	248.6	127.7	376.2
II	282.2	142.1	424.3	II	250.8	140.8	391.6
III	247.5	122.2	369.7	III	260.6	152.1	412.8
IV	290.8	132.1	422.9	IV	353.6	142.2	495.7
1982	1,000.7	500.8	1,501.5	1984			
I	246.3	120.9	367.2	I			430.0
II	247.2	128.0	375.3	II			
III	273.5	129.2	402.6	III			
IV	233.7	122.7	356.4	IV			

[1] Smoked, dried or cooked. Under Federal Inspection. *Source: Agricultural Marketing Service, USDA* T.517a

U.S. Frozen Pork Belly Storage Stocks (In Thousand Pounds, as of First of the Month)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1973	39,278	32,388	30,764	46,406	50,205	54,980	48,817	26,270	10,186	9,140	15,397	31,580
1974	48,758	48,499	53,083	65,237	78,707	87,290	70,470	39,621	21,762	12,850	22,274	38,441
1975	49,514	40,374	42,846	51,771	65,645	65,470	53,389	22,995	10,057	7,418	17,645	33,532
1976	44,722	37,386	38,526	51,176	60,144	63,799	49,258	25,773	8,689	5,858	9,708	24,946
1977	42,906	38,338	36,364	52,806	69,539	80,658	62,695	29,901	9,640	5,241	4,230	20,642
1978	23,747	19,013	15,738	39,631	70,976	82,343	75,027	44,787	21,015	7,482	20,013	40,964
1979	54,367	39,432	37,172	57,744	69,689	86,065	78,935	53,373	21,800	11,077	17,739	42,156
1980	70,201	69,635	67,800	85,444	98,163	106,869	96,967	68,616	34,410	21,867	42,186	72,127
1981	97,365	90,181	94,661	104,357	125,469	132,568	117,795	72,998	36,094	16,228	18,060	35,058
1982	54,639	46,167	41,855	66,061	—	—	72,593	—	—	7,558	—	—
1983	31,292	33,592	33,400	44,304	54,510	64,671	63,468	48,409	26,642	15,672	20,047	52,924
1984[1]	78,648	71,568	78,169	95,070								

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.517

PORK BELLIES

Wkly Fed. Inspected Hog Slaughter

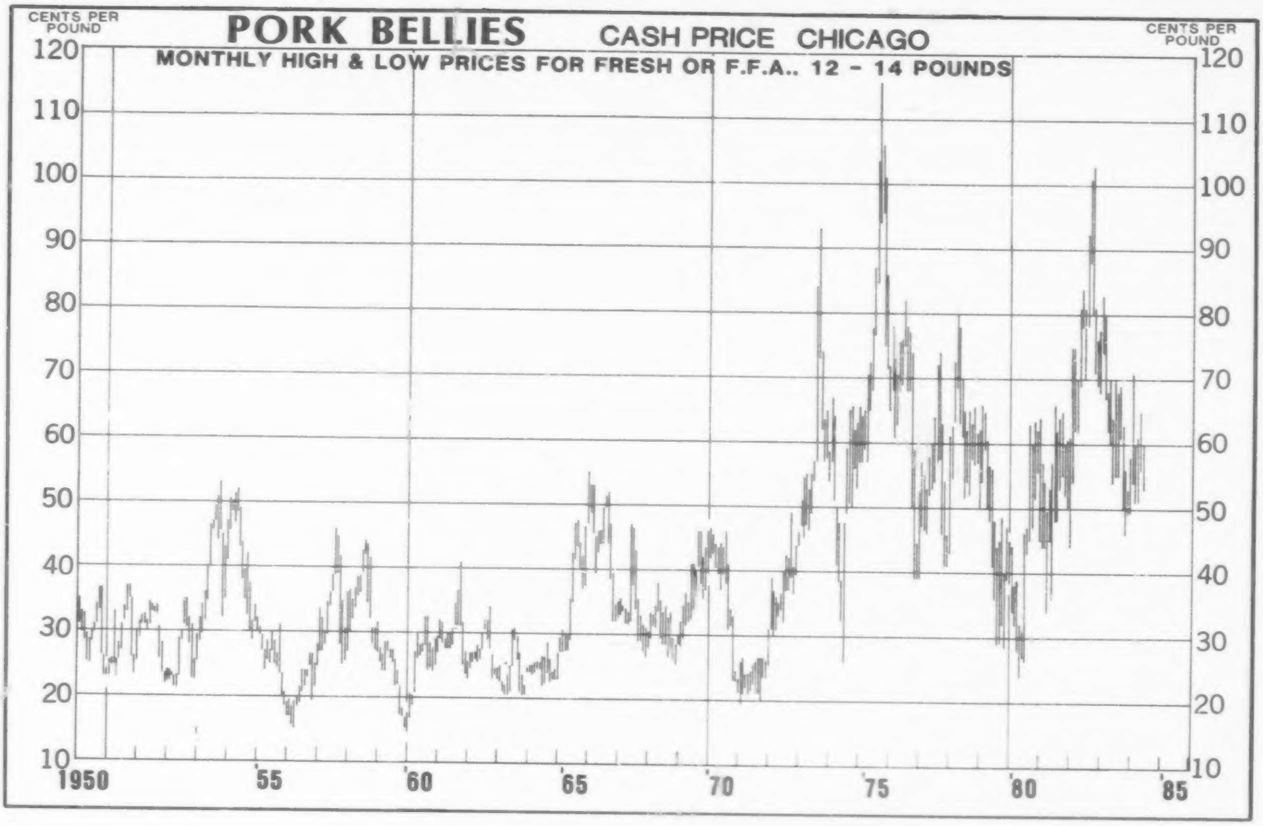
1983[2] Week Ending		(In Thousand Head) 1982	1981	1980	1979
Jan. 1	1,204	1,428	1,297	1,378	
8	1,457	1,881	1,957	1,972	1,179
15	1,564	1,656	1,885	1,762	1,625
22	1,561	1,643	1,793	1,785	1,389
29	1,519	1,623	1,816	1,777	1,345
Feb. 5	1,350	1,552	1,773	1,770	1,383
12	1,467	1,650	1,731	1,760	1,381
19	1,491	1,484	1,672	1,642	1,488
Mar. 5	1,544	1,652	1,698	1,765	1,367
12	1,646	1,698	1,757	1,806	1,533
19	1,584	1,676	1,823	1,898	1,592
26	1,546	1,663	1,826	1,885	1,663
Apr. 2	1,558	1,705	1,840	1,858	1,607
9	1,607	1,609	1,848	1,858	1,646
16	1,738	1,606	1,914	1,736	1,644
23	1,704	1,608	1,823	1,919	1,669
30	2,694	1,656	1,727	2,028	1,609
May 7	1,659	1,640	1,771	2,028	1,710
14	1,642	1,596	1,763	1,918	1,759
21	1,607	1,610	1,771	1,973	1,677
28	1,558	1,553	1,694	1,916	1,598
June 4	1,390	1,532	1,422	1,891	1,592
11	1,617	1,279	1,561	1,582	1,390
18	1,528	1,561	1,618	1,851	1,647
25	1,510	1,467	1,500	1,747	1,631
July 2	1,557	1,416	1,434	1,683	1,398
9	1,348	1,394	1,324	1,669	1,600
16	1,538	1,162	1,401	1,269	1,269
23	1,493	1,434	1,444	1,573	1,630
30	1,535	1,352	1,442	1,600	1,590
Aug. 6	1,476	1,357	1,496	1,530	1,595
13	1,540	1,398	1,539	1,574	1,638
20	1,535	1,391	1,554	1,553	1,662
27	1,473	1,424	1,576	1,611	1,692
Sept. 3	1,613	1,400	1,591	1,612	1,664
10	1,435	1,411	1,658	1,497	1,509
17	1,772	1,286	1,456	1,867	1,776
24	1,716	1,527	1,785	1,812	1,764
Oct. 1	1,732	1,418	1,699	1,707	1,772
8	1,841	1,501	1,742	1,759	1,870
15	1,844	1,482	1,769	1,791	1,950
22	1,895	1,536	1,817	1,864	1,929
29	1,844	1,599	1,786	1,861	1,909
Nov. 5	1,927	1,614	1,814	1,955	2,016
12	1,955	1,620	1,789	1,810	1,790
19	1,981	1,677	1,841	2,022	1,548
26	1,593	1,650	1,511	1,514	1,981
Dec. 3	1,944	1,310	1,947	1,952	1,940
10	1,941	1,676	1,884	1,841	1,861
17	1,801	1,523	1,884	1,841	1,861
24	1,465	1,588	1,864	1,816	1,746
31	1,350	1,278	1,223	1,191	1,277
1984[2]					
Jan. 7	1,418				
14	1,708				
21	1,625				
28	1,577				
Feb. 4	1,543				
11	1,571				

Weekly Pork Belly Storage Movement

Stocks[1] in Thousands of Pounds

1983[2] Week Ending	In	Out	On Hand	Net Movement	1982 Week Ending	In	Out	On Hand	Net Movement
Jan. 1	1,802	215	28,723	+1,581	Jan. 2	1,066	606	47,064	+ 460
8	1,040	191	29,572	+ 849	9	575	1,449	46,190	− 874
15	300	701	29,171	− 401	16	1,374	1,260	46,304	+ 114
22	253	778	28,646	− 525	23	527	1,457	46,480	− 930
29	398	805	28,239	− 407	30	574	5,137	41,917	−4,563
Feb. 5	378	868	27,749	− 490	Feb. 6	223	4,901	37,239	−4,678
12	200	737	27,212	− 537	13	523	2,282	35,480	−1,759
19	720	773	27,159	− 53	20	499	1,226	34,753	− 727
26	970	240	27,889	+ 730	27	1,435	701	35,487	+ 734
Mar. 5	1,816	162	29,543	+1,654	Mar. 6	4,754	517	39,724	+4,237
12	2,053	126	31,470	+1,927	13	6,343	76	45,991	+6,267
19	2,160	262	33,368	+1,898	20	4,509	—	50,500	+4,509
26	2,453	171	35,650	+2,282	27	4,886	289	55,097	+4,597
Apr. 2	2,056	386	37,320	+1,670	Apr. 3	3,907	314	58,690	+3,593
9	780	426	37,674	+ 354	10	3,444	136	61,998	+3,308
16	1,979	119	29,534	+1,860	17	1,856	255	63,599	+1,601
23	2,909	333	42,110	+2,576	24	1,158	490	64,267	+ 668
30	2,424	92	44,442	+2,332	May 1	717	560	64,424	+ 157
May 7	3,160	128	47,474	+3,022	8	1,845	563	65,706	+1,282
14	2,382	221	49,635	+2,161	15	2,181	326	67,561	+1,855
21	2,060	91	51,604	+1,969	22	3,264	420	70,405	+2,844
28	1,922	153	53,373	+1,769	29	2,392	590	72,207	+1,802
June 4	1,887	212	55,048	+1,675	June 5	1,231	552	72,886	+ 679
11	1,351	138	56,261	+1,283	12	1,602	797	73,691	+ 805
18	864	477	56,708	+ 447	19	1,717	2,960	72,448	−1,243
25	303	1,619	55,392	−1,316	26	554	4,464	68,538	−3,910
July 2	499	2,223	53,668	−1,724	July 3	363	5,910	62,991	−5,547
9	792	2,326	52,134	−1,534	10	148	6,006	57,133	−5,858
16	165	3,314	48,985	−2,149	17	254	5,947	51,440	−5,693
23	547	4,104	45,426	−3,557	24	179	5,895	45,724	−5,716
30	248	4,549	41,125	−4,301	31	116	6,238	39,629	−6,095
Aug. 6	140	5,599	35,666	−5,459	Aug. 7	113	5,241	34,501	−5,128
13	449	4,384	31,731	−3,935	14	148	5,882	28,767	−5,734
20	209	4,073	27,867	−3,864	21	80	6,612	22,235	−5,532
27	268	3,867	24,268	−3,599	28	369	5,436	17,168	−5,127
Sept. 3	108	2,573	21,803	−2,465	Sept. 4	761	3,320	14,609	−2,559
10	190	2,879	19,114	−2,689	11	265	2,977	11,897	−2,712
17	206	3,158	16,162	−2,952	18	414	3,703	8,608	−3,289
24	539	1,992	14,709	−1,453	25	314	3,014	5,908	−2,700
Oct. 1	33	2,184	12,558	−2,151	Oct. 2	411	1,636	4,683	−1,225
8	222	1,872	10,908	−1,650	9	514	1,301	3,896	− 787
15	645	1,184	10,369	− 539	16	610	1,054	3,452	− 444
22	1,079	371	11,077	+ 708	23	820	756	3,516	+ 64
29	3,501	168	14,410	+3,333	30	1,775	431	4,860	+1,344
Nov. 5	4,750	347	18,813	+4,403	Nov. 6	1,690	140	6,410	+1,550
12	7,668	300	26,181	+7,368	13	2,942	299	9,053	+2,643
19	8,048	277	33,952	+7,771	20	4,591	483	13,161	+4,108
26	7,374	43	41,283	+7,331	27	3,534	292	16,403	+3,242
Dec. 3	7,410	412	48,281	+6,998	Dec. 4	4,208	403	20,208	+3,805
10	8,893	102	57,072	+8,791	11	3,822	369	23,661	+3,453
17	7,964	703	64,333	7,261	18	1,843	190	25,314	+1,653
24	5,880	341	69,873	+5,539	25	2,159	337	27,136	+1,822
31	1,400	334	70,939	+1,066					
1984[2]									
Jan. 7	1,189	1,232	70,926	− 13					
14	677	2,016	69,587	−1,339					
21	83	3,077	66,593	−2,994					
28	202	3,219	63,576	−3,017					
Feb. 4	235	1,537	62,274	−1,302					
11	996	691	62,579	+ 305					

[1] Total approved Chi. Merc. Exch. warehouses. [2] Preliminary. *Sources: U.S. Department of Agriculture; Chicago Mercantile Exchange* T.518

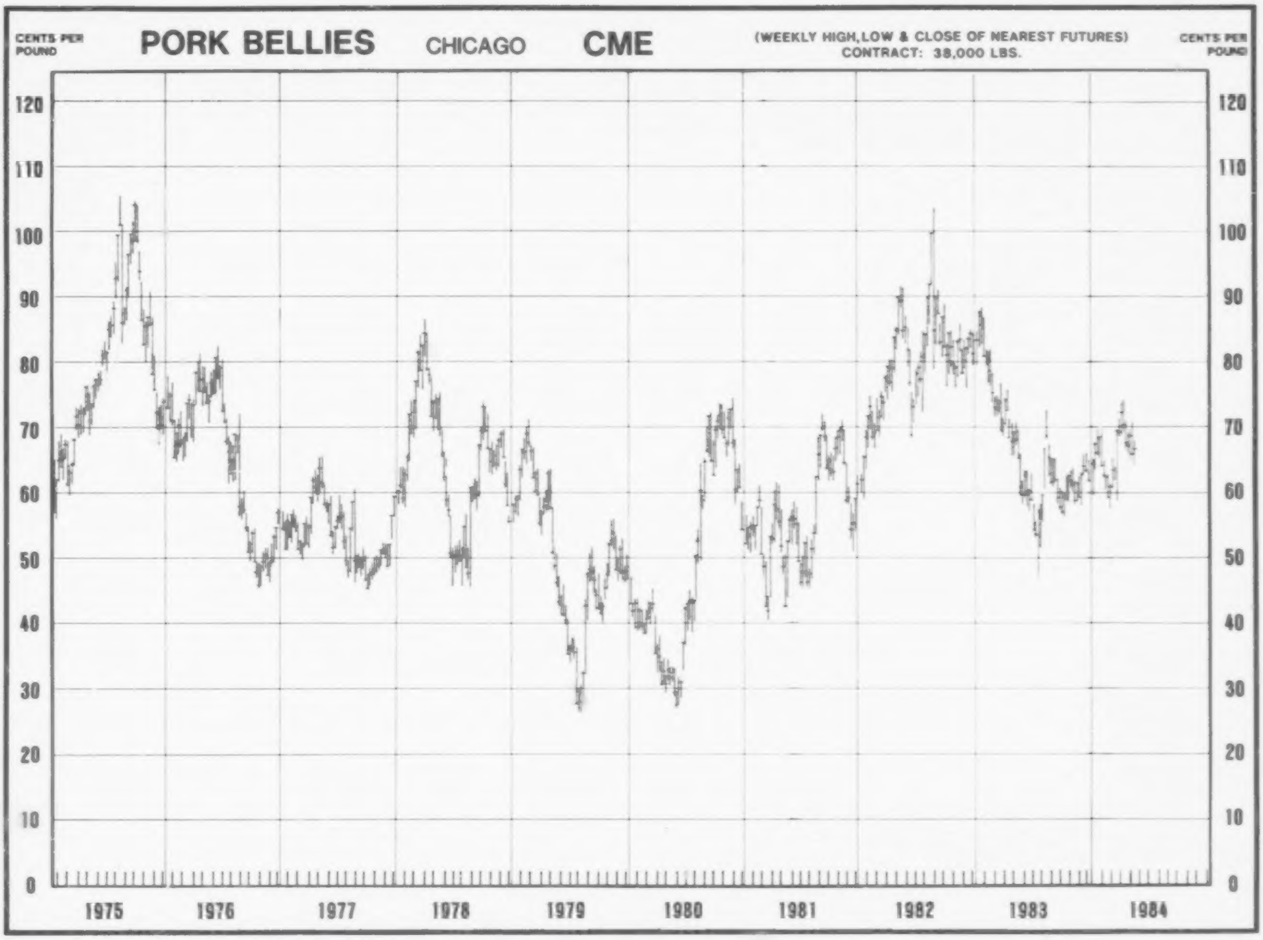


High, Low & Closing Prices of May Pork Bellies Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	
1978	High	56.35	60.50	59.85	53.80	54.80	49.50	49.40	48.20	52.20	57.25	[illegible]	74.35	86.25	84.15	75.40	86.25
	Low	53.15	54.35	52.60	46.50	46.05	43.85	44.45	44.25	46.90	48.15	[illegible]	62.15	71.55	69.47	67.90	43.85
	Close	55.60	56.20	53.75	52.70	46.60	47.10	44.50	46.65	50.50	57.22	61.86	71.55	84.15	73.90	69.50	—
1979	High	72.50	69.30	68.75	65.20	60.00	62.70	68.00	72.02	68.40	68.70	63.70	70.95	67.30	63.60	63.50	72.50
	Low	63.10	65.00	62.25	50.30	51.65	54.70	56.10	62.80	62.60	55.00	55.80	62.50	54.60	50.85	47.95	47.95
	Close	69.50	65.00	64.25	53.50	60.00	57.47	67.70	65.27	66.70	56.27	63.45	65.25	55.35	63.27	49.35	—
1980	High	—	56.10	55.60	51.05	49.20	49.30	52.42	50.25	57.85	54.60	53.47	44.85	46.70	38.00	34.30	57.85
	Low	—	50.25	47.90	43.10	39.35	39.10	43.40	41.65	47.60	47.92	41.55	39.65	34.77	29.45	30.40	29.45
	Close	—	56.10	47.90	43.65	41.00	48.60	45.60	48.70	50.27	49.50	43.05	42.50	36.30	30.27	31.60	—
1981	High	58.50	52.60	49.75	54.50	61.60	66.25	73.30	75.15	75.15	77.05	59.60	63.00	55.30	61.35	52.65	77.05
	Low	49.75	46.15	43.35	41.32	53.50	57.40	59.25	63.47	67.70	58.05	53.65	52.55	41.90	52.15	42.45	41.32
	Close	51.10	48.40	43.45	53.90	59.30	59.50	68.47	71.20	75.15	58.05	57.70	52.55	55.05	52.15	48.77	—
1982	High	69.15	75.50	72.70	75.90	69.40	72.10	72.50	70.22	71.40	63.75	73.55	75.80	77.85	85.10	91.50	91.50
	Low	54.50	70.15	63.00	64.10	61.75	64.12	62.70	62.95	59.25	51.90	61.12	67.55	69.00	74.75	84.15	51.90
	Close	69.15	70.15	72.70	64.10	65.15	64.95	65.15	68.85	61.05	62.70	73.55	70.37	75.15	84.92	84.95	—
1983	High	73.85	77.95	79.20	77.00	75.00	82.90	85.45	82.05	83.10	83.30	86.30	81.55	76.40	75.90	70.90	86.30
	Low	70.20	71.65	74.00	65.25	67.25	69.02	75.37	75.80	74.25	74.35	78.15	74.25	68.50	65.60	64.45	64.45
	Close	72.60	77.55	79.00	72.72	74.35	82.10	82.40	77.80	80.75	79.70	79.70	74.25	70.60	67.80	65.05	—
1984	High	65.40	65.95	65.90	61.90	64.75	71.55	66.80	64.40	65.60	67.40	71.30	68.10	71.07	74.10		
	Low	61.25	62.80	60.00	56.00	54.70	61.50	59.50	58.35	60.32	60.40	62.12	59.25	60.55	65.50		
	Close	64.90	64.72	61.00	57.15	61.90	65.37	59.37	64.22	62.30	63.62	67.27	60.70	69.22	65.82		
1985	High	79.95	80.50														
	Low	67.00	74.95														
	Close	78.50	75.30														

Source: Chicago Mercantile Exchange

T 519



Month End Open Interest of Pork Bellies Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	10,544	10,029	9,756	10,898	11,500	10,407	8,780	7,557	8,221	9,780	11,956	13,087
1979	10,597	10,592	9,337	10,586	14,069	23,174	25,400	22,840	22,062	21,805	25,585	27,981
1980	29,631	28,195	18,212	22,939	28,404	26,944	20,025	14,983	18,242	23,098	26,231	22,480
1981	15,687	12,471	12,821	16,714	15,825	18,911	11,550	10,058	10,424	14,088	16,425	13,643
1982	21,542	21,666	21,048	28,063	25,765	17,940	14,203	14,799	16,090	19,063	18,596	18,521
1983	19,654	16,510	17,563	16,850	16,870	17,242	12,162	12,268	16,042	16,976	20,242	20,247
1984	18,836	17,434	19,114	18,332								
1985												

Source: Chicago Mercantile Exchange T.520

Volume of Trading of Pork Bellies Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	137,389	132,101	150,884	134,178	166,433	126,865	113,817	92,169	83,650	109,911	100,223	92,022	1,439,651
1979	114,980	99,552	106,840	99,408	117,262	154,721	162,816	151,865	118,087	120,649	139,703	121,509	1,514,176
1980	191,920	206,539	189,881	183,876	165,844	206,669	198,256	169,404	167,355	220,435	178,821	176,622	2,250,945
1981	176,243	154,438	135,527	179,503	157,342	199,013	187,785	131,619	139,272	171,480	194,561	170,944	1,997,697
1982	196,040	216,333	263,431	265,863	301,763	248,825	217,434	229,207	188,129	224,449	227,482	232,688	2,811,674
1983	276,556	229,198	207,543	225,034	226,617	227,522	218,813	169,113	132,894	154,642	159,982	175,363	2,403,277
1984	221,795	182,080	186,817	159,774									

Source: Chicago Mercantile Exchange T.521

Potatoes

The USDA estimated the 1983 U.S. fall potato crop at 288 million cwt., 6 percent below the 1982 harvest which was the second largest crop in history. Acres harvested decreased by 3 percent to a total of 1.06 million. The 1983 U.S. average fall crop yield per acre was reduced by 11 cwt. to 272 cwt. per acre. Record high yields were recorded in Washington state at 520 cwt., a rise of 40 cwt. from 1982.

Production in the seven Eastern states was estimated at 37.7 million cwt. as of December 1, 1983, down 19 percent from 1982. A total of 164,000 acres were harvested, a decrease of 11 percent from 1982. The average yield was estimated at 230 cwt. per acre, down 25 cwt. from 1982, and a reflection of an 18 percent reduction in the Maine crop.

Fall 1983 potato production in the 9 Western potato states was estimated at 187 million cwt., down 4 percent from 194 million cwt. in 1982. The total area harvested was just below the 597,600 acres harvested in 1982, and the average yield per acre in 1983 was about 330 cwt. vs. the 1982 figure of 322 cwt.

The 8 Central producing states' fall 1983 crop was estimated at 63.7 million cwt., 4 percent below the previous year's crop. In 1983, 317,000 acres were harvested vs. 312,400 in 1982. The average yield in 1983 was 201 cwt. an acre vs. 217 cwt. in 1982.

Producer prices for potatoes in 1983 were 27 percent above prices in 1982. Tablestock potato prices for the year were running slightly above 1982 levels in response to ample supplies earlier in the year and continuing strong demand. Processing demand was expected to show a small decrease from 1982. As of January 1, 1984, 47.9 million cwt. were used for processing vs. 48.7 recorded for the corresponding year-earlier date. Reduced stocks on hand as of January 1, and a recovery in demand helped explain higher producer prices in 1983.

Frozen potato stocks continued their upward climb through 1983 reaching a record-high 1 billion pounds in July. Frozen french fries accounted for approximately 80 percent of all frozen products.

On January 1, 1984 stocks of fall potatoes in the 15 major states were estimated at 161 million cwt., compared with 179 million on January 1, 1983. Holdings were down in the Western states, except California, where stocks were slightly above a year earlier. Stocks in the Central states were down 3 percent from a year earlier. Holdings in North Dakota and Ohio were up 10 and 22 percent, respectively, while stocks in the other four states exhibited moderate to substantial reductions. Stocks in the Eastern states declined sharply from 1983 holdings and showed the largest decreases of the three regions. Eastern holdings totaled 22 million cwt., down 22 percent from 1983. Stocks in Maine and New York fell about a fifth, and those in Pennsylvania tumbled 44 percent.

Through January 1, 1984 the disappearance of potatoes in the major storage states, at 117 million, was only 1 percent behind a year ago. Included in this estimate were 15.9 million cwt. of shrinkage and those potatoes dumped and lost to date. Shrinkage was down by about 20 percent from a year earlier.

Farmers were expected to expand potato acreage in 1984. Moderate acreage increases were expected for the spring and summer crops, which account for about 10 to 14 percent of total annual production. The fall crop, by far the most important, was expected to post a 2 to 6 percent acreage gain.

Futures Market

Round White potato futures are traded on the New York Mercantile Exchange.

World Production of Potatoes In Thousands of Metric Tons

Yr. of Harvest	Austria	Canada	Czechoslovakia	France	E. Germany	W. Germany	Italy	Japan	Netherlands	Poland	Spain	United Kingdom	USSR	United States	World Total
1978	1,401	2,496	3,863	7,467	10,100	10,510	2,801	3,316	6,231	46,648	5,316	7,330	86,100	16,615	250,568
1979	1,494	2,760	3,725	5,900	12,243	8,716	2,957	3,381	5,937	49,600	5,400	6,485	90,956	15,536	255,134
1980	1,264	2,478	2,713	6,864	9,214	6,694	2,396	3,421	6,267	26,391	5,742	7,080	67,023	13,737	202,263
1981[1]	1,176	2,541	3,500	5,294	10,000	7,586	2,204	3,250	6,445	43,074	5,483	6,282	72,000	15,358	225,320
1982[2]		2,602						3,650		35,000			83,000	15,958	
1983[2]														14,774	

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.523

Salient Statistics of Potatoes in the United States

Year	Acreage: Planted — 1,000 Acres —	Acreage: Harvested — 1,000 Acres —	Yield Per Harv. Acre Cwt.	Farm Disposition Used Where Grown: Seed & Feed — Million Cwt. —	Farm Disposition Used Where Grown: Shrinkage & Loss — Million Cwt. —	Sold[3] — Million Cwt. —	Farm Price $ Cwt.	Value of Prod.[6] — Million $ —	Value of Sales — Million $ —	Stocks on Jan. 1[4] 1,000 Cwt.	Foreign Trade[5] Dom. Exports — 1,000 Cwt. —	Foreign Trade[5] Imports — 1,000 Cwt. —	Consumption[2] Per Capita in Lbs. Fresh	Consumption[2] Per Capita in Lbs. Processed
1978	1,401	1,375	267	6.3	34.4	325.6	3.38	1,224	1,097	175,300	3,025	703	50.8	69.6
1979	1,310	1,270	270	5.9	30.2	306.4	3.43	1,172	1,052	193,520	2,336	1,141	54.3	65.3
1980	1,182	1,154	262	6.4	23.4	273.1	6.55	1,979	1,788	176,020	2,459	2,412	55.8	61.9
1981	1,263	1,237	274	6.0	26.1	306.5	5.41	1,819	1,660	146,610	2,561	3,214	47.2	65.4
1982[1]	1,307	1,274	276	7.3	30.7	313.9	4.45	1,547	1,398	163,680			48.6	65.6
1983[1]	1,265	1,239	263				5.69			178,750				
1984[1]										161,210				

Note: 60 pounds equals one bushel. [1] Preliminary. [2] Fresh & processed. [3] For all purposes, including food, seed processing livestock feed. [4] Merchantable stocks held by growers & local dealers. [5] Year beginning July. [6] Farm weight basis. Excludes canned & frozen potatoes. *Source: Economic Research Service, U.S.D.A.* T.522

POTATOES

Potato Crop Production Estimates, Stocks & Disappearance in the U.S. In Millions of Cwt.

	Crop Production Estimates						Total Storage Stocks[2]						Disappearance of Previous Fall Crop Until				
	Total Crop			Fall Crop				Following Year						Following Year			
Year	Oct. 1	Nov. 1	Dec.	Oct. 1	Nov. 1	Dec. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1
1976	349.9	349.3	353.4	299.8	299.2	302.8	198.6	172.2	142.0	112.8	81.1		99.1	128.3	157.8	188.0	218.4
1977	350.6	350.4	352.0	303.6	303.4	304.4	202.6	175.3	147.9	119.9	88.7		93.8	122.8	149.9	177.9	210.2
1978	353.6	357.7	360.5	312.0	316.0	318.7	219.9	193.5	163.0	132.6	99.3	64.8	94.6	122.0	153.0	185.0	218.0
1979	347.9	348.3	347.6	300.3	300.7	301.6	200.8	176.0	147.9	121.7	92.6	59.5	87.5	114.0	143.0	170.0	200.0
1980	296.9	296.9	301.0	260.7	260.7	264.6	171.7	146.6	121.6	97.3	72.5	44.4	84.1	110.0	135.0	160.0	186.0
1981	329.9	329.9	333.7	287.1	287.1	290.7	192.8	163.2	137.1	111.3	81.9	50.7	93.6	121.0	149.0	175.0	204.0
1982	350.0	350.0	349.3	306.9	308.9	305.0	206.2	178.8	149.6	121.5	89.1	56.9	92.3	121.0	149.0	178.0	209.0
1983[1]	329.8	329.8	325.7	292.7	292.7	325.7	187.1	161.2	134.7	108.4	77.4		90.7	117.0	143.0	169.0	200.1

[1] Preliminary. [2] Held by growers & local dealers in the fall producing areas. *Source: Crop Reporting Board, U.S.D.A.* T.525

United States Potato Production by Seasonal Groups In Millions of Hundredweight (CWT.)

		Spring			Summer		Fall								
Year	Winter	Florida	Calif.	Total Spring	Va.	Total	Maine	Wisc.	Minn.	No. Dak.	Wash.	Idaho	Oregon	Total Fall	Total U.S.
1976	3.0	4.5	13.5	24.7	3.5	22.5	27.4	15.4	11.1	16.9	55.8	88.5	28.9	307.4	357.7
1977	2.7	4.6	11.9	22.9	3.5	22.0	28.3	18.0	13.0	21.6	50.6	88.2	25.6	307.1	355.3
1978	2.6	3.7	8.3	18.0	2.7	20.9	26.0	17.3	14.9	23.6	50.5	100.3	28.5	324.9	366.3
1979	2.4	4.4	11.1	21.3	2.6	21.8	27.7	17.0	12.9	18.2	48.5	85.1	25.3	296.9	342.5
1980	2.4	3.6	8.8	17.1	1.5	17.0	25.0	16.0	9.9	15.7	43.9	79.8	19.7	266.4	302.9
1981	2.2	5.3	10.3	20.8	2.3	20.0	26.5	18.2	13.3	20.1	52.9	84.5	21.7	295.6	338.6
1982	2.3	5.4	9.6	20.6	2.2	21.5	27.0	22.6	11.5	17.3	52.8	91.7	21.1	307.5	351.8
1983[1]	2.2	4.9	8.3	18.3	1.0	17.2	22.1	18.9	10.3	20.5	53.6	83.6	20.7	288.0	325.7
1984[1]	2.9	6.2	11.1	23.0											

[1] Preliminary, December estimate. *Source: U.S.D.A.—Crop Reporting Board* T.524

United States Potatoes Processed[1], Eight States In Thousands of cwt.

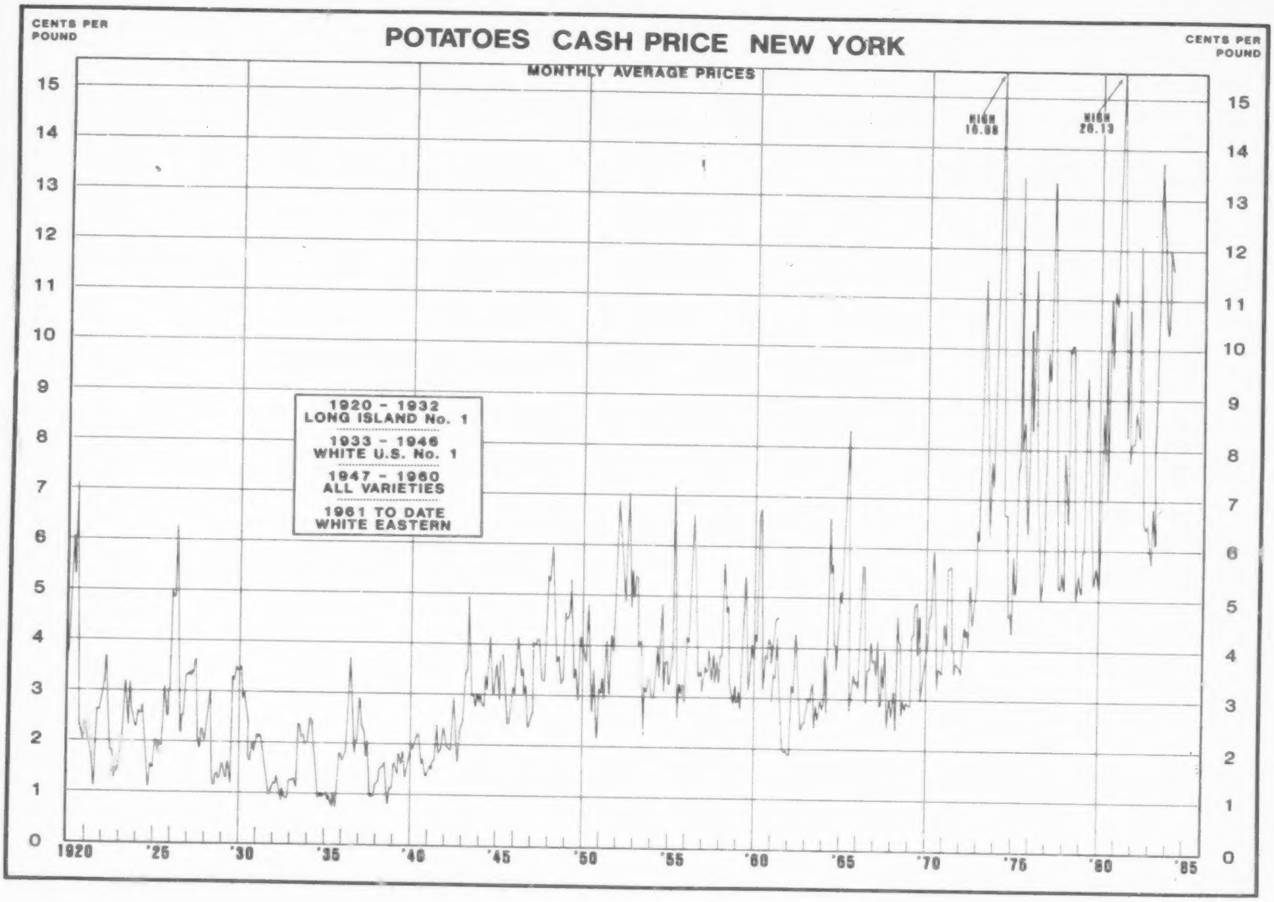
States	Storage Season	to Dec. 1	to Jan. 1	to Feb. 1	to Mar. 1	to Apr. 1	to May 1	Entire Season
Idaho and Malheur Co., Oreg.	1982–83	14,330	18,645	23,395	28,535	34,480	39,715	53,395
	1983–84	15,755	20,445	24,785	29,540	35,155		
	1984–85							
Maine[2]	1982–83	1,915	2,800	3,640	4,400	5,230	6,010	7,450
	1983–84	1,120	1,515	2,170	2,730	3,315		
	1984–85							
Wash. and other areas, Oreg.	1982–83	16,840	20,130	23,685	27,870	32,100	36,365	45,500
	1983–84	16,245	19,920	23,690	28,250	33,280		
	1984–85							
Other States[3]	1982–83	5,655	7,135	8,625	10,220	12,170	13,820	16,405
	1983–84	4,305	6,005	7,755	9,600	11,615		
	1984–85							
Total	1982–83	38,740	48,710	59,345	71,025	83,980	95,910	122,750
	1983–84	37,425	47,885	58,400	70,120	83,365		
	1984–85							

[1] Total quantity received and used for processing regardless of the state in which the potatoes were produced. Does not include quantities used for potato chips in Maine, Mich., Minn., N. Dak. or Wis. [2] Includes Maine grown potatoes only. [3] Mich., Minn., N. Dak. and Wis. *Source: Crop Reporting Board, U.S.D.A.* T.524a

U.S. Cold Storage Stocks of All Frozen Potatoes (First of Month) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1976	683.2	689.9	744.9	787.6	791.8	794.8	756.6	606.1	508.8	562.4	666.8	745.2
1977	750.4	777.2	809.1	870.8	893.3	903.0	886.5	720.5	576.4	611.0	726.7	805.0
1978	829.8	857.8	901.2	923.7	944.4	971.6	954.8	772.6	627.2	644.9	738.4	769.8
1979	777.5	778.7	784.5	818.2	849.3	930.4	971.7	866.0	671.3	647.1	761.0	814.3
1980	812.2	835.1	868.2	906.6	908.2	958.7	964.0	814.3	598.5	626.5	754.3	813.2
1981[1]	729.9	707.5	757.8	774.4	792.6	812.4	792.7	592.2	457.9	563.9	718.4	746.9
1982[1]	688.7	703.5	783.4	846.0	—	—	939.3	—	—	626.8	—	—
1983[1]	767.3	800.1	879.9	911.9	958.0	986.6	1,015.3	823.2	603.8	637.2	775.2	817.4
1984[1]	773.0	754.8	783.9	827.8								

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.529



Wholesale Price of Potatoes at New York In Dollars Per Cwt.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
WHITE, WESTERN, NEW YORK[1]													
1975	9.925	9.750	8.500	8.750	11.750	11.750	13.750	14.500	12.000	12.750	12.250	12.000	11.473
1976	11.850	12.250	12.250	12.750	12.500	12.000	10.875	9.500	N.A.	N.A.	10.000	10.250	11.423
1977	10.250	11.500	11.000	11.500	11.500	13.750	10.500	16.500	N.A.	11.000	12.250	11.000	11.886
1978	N.A.	N.A.	N.A.	N.A.	12.500	14.416	17.916	16.834	15.000	14.626	12.500	12.250	14.505
1979	12.750	17.376	16.250	11.750	12.000	13.084	7.500	6.313	6.250	6.875	6.875	9.063	10.507
1980	8.500	7.438	8.625	8.188	8.188	7.583	10.833	10.250	11.000	11.000	11.000	9.750	9.363
1981	12.375	11.875	11.000	11.000	10.250	11.000	11.417	11.750	11.000	10.000	9.750	11.500	11.076
1982	19.000	20.000	19.000	18.500	23.000	19.750	17.000	21.500	15.000	19.000	19.000	16.500	18.942
1983	N.A.	21.000	21.500	20.250	N.A.	19.000	27.375	20.000	22.500	27.308	20.500	19.000	21.843
1984	26.000	26.250											
WHITE, EASTERN, NEW YORK[2]													
1975	4.333	5.875	5.125	5.333	7.438	7.750	13.417	8.000	8.538	8.000	7.000	6.325	7.261
1976	8.375	10.375	8.375	11.467	11.583	8.500	8.063	6.250	5.000	5.250	5.500	5.683	7.868
1977	7.125	9.917	9.383	12.375	13.375	11.313	7.875	5.250	5.200	5.500	5.550	5.175	8.170
1978	5.250	7.917	6.475	8.150	10.000	9.917	10.500	6.500	5.000	5.500	5.500	5.133	7.154
1979	5.867	5.967	8.083	9.413	9.000	8.125	7.333	5.750	5.333	5.625	5.617	5.250	6.780
1980	6.000	8.500	8.717	7.750	10.000	7.000	10.500	11.000	9.625	10.625	11.125	10.875	9.310
1981	13.000	13.625	18.083	20.125	16.875	17.000	12.125	8.250	10.833	7.750	8.125	8.125	12.826
1982	8.125	8.750	8.375	8.250	12.125	11.000	9.625	6.625	6.417	6.500	6.250	6.000	8.170
1983	5.750	6.875	6.125	9.000	9.250	9.750	13.750	12.500	11.500	10.500	10.250	10.625	9.656
1984	12.000	11.625											

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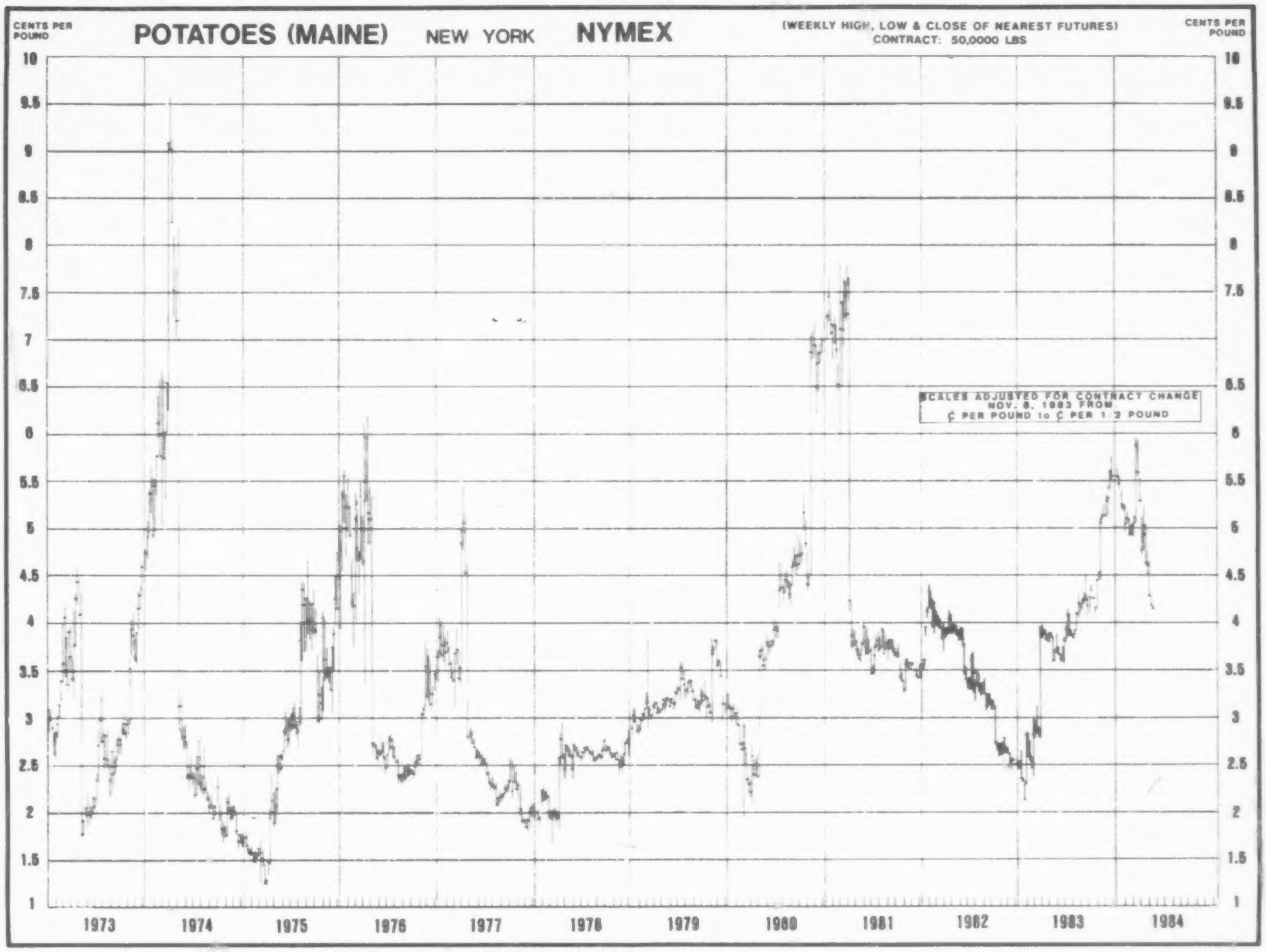
[1] All varieties and types of Irish old and new stock. U.S. No. 1A, Western origin, N.Y. Market (0113-0444.01). [2] Same, Eastern Origin (0113-0443). *Source: Bureau of Labor Statistics*

T.527

POTATOES



High, Low & Closing Prices of April Potato Futures at New York In Cents per Pound

Year of Delivery		Year Prior to Delivery											Delivery Year				Life of Delivery Range
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
1979	High	6.70	7.03	7.19	6.90	6.64	6.45	6.90	6.65	6.32	5.88	5.92	6.45	6.50	7.60	—	7.60
	Low	6.55	6.60	6.52	6.26	6.34	5.95	6.04	6.12	5.17	5.14	5.30	5.83	5.94	6.30	—	5.14
	Close	6.60	7.03	6.75	6.47	6.40	6.20	6.59	6.23	5.75	5.64	5.85	6.04	6.45	7.60[1]	—	—
1980	High	—	—	—	—	—	11.74	11.00	10.74	10.76	9.33	8.24	7.05	6.40	5.80	—	11.74
	Low	—	—	—	—	—	9.70	10.30	8.65	8.70	8.10	6.80	6.01	5.36	4.01	—	4.01
	Close	—	—	—	—	—	10.40	10.75	9.72	9.08	8.19	6.85	6.07	5.36	4.05	—	—
1981	High	—	—	—	10.10	12.22	15.62	15.47	16.06	16.70	16.74	16.98	17.75	17.40	15.51	—	17.75
	Low	—	—	—	8.25	9.70	11.42	13.55	14.66	14.58	14.75	14.85	15.85	13.90	12.93	—	8.25
	Close	—	—	—	9.96	11.91	13.73	14.72	15.38	14.77	16.58	16.73	16.79	14.14	14.44	—	—
1982	High	—	11.87	11.49	10.25	10.22	10.86	10.99	10.80	10.50	8.77	8.77	8.99	9.39	8.25	—	11.87
	Low	—	11.05	9.70	9.40	8.85	8.93	10.02	9.96	8.14	8.17	7.72	7.75	8.22	7.40	—	7.40
	Close	—	11.14	9.85	10.21	9.04	10.50	10.20	10.11	8.37	8.48	7.85	8.64	8.27	7.80	—	—
1983	High	—	—	10.74	10.65	10.20	9.75	9.13	8.72	8.49	6.90	6.83	7.41	6.69	6.23	—	10.74
	Low	—	—	9.71	9.85	8.52	8.44	8.49	8.20	6.20	6.10	6.28	6.37	5.82	5.46	—	5.46
	Close	—	—	10.50	10.01	8.74	8.73	8.70	8.25	6.25	6.56	6.57	6.50	5.82	5.87	—	—
1984	High	—	—	—	—	5.00	5.39	6.10	6.25	5.25	5.85	6.48	6.28	5.75	5.97	5.12	6.48
	Low	—	—	—	—	4.17	4.40	5.20	5.67	4.55	5.30	5.71	5.68	5.38	5.24	4.53	4.17
	Close	—	—	—	—	4.40	5.30	5.74	6.00	4.75	5.85	6.38	5.62	5.75	5.29	4.53	—

[1] Liquidated March 8, 1979. *Source: N.Y. Mercantile Exch.*

T 528

Utilization of Potatoes in the United States In Millions of Cwt.

	Sales												
		For Processing							Other Sales				
Crop Year	Table Stock	Chips, Shoe-strings	For dehy-dration	Frozen French Fries	Other Frozen Pdt's	Canned Po-tatoes	Other Canned Pdt's[2]	Starch & Flour	Live-stock Feed	Seed	Total Sales	Used on Farms Where Grown	Total
1973	107.6	34.5	31.4	60.3	9.6	2.7	2.5	2.7	3.7	20.1	275.1	25.0	300.0
1974	125.6	32.8	34.7	69.2	9.2	2.6	2.1	3.7	4.2	19.4	303.4	39.0	342.4
1975	114.4	34.1	33.8	70.6	9.3	1.9	2.1	2.2	4.3	20.7	293.5	28.8	322.3
1976	123.1	34.6	40.4	79.7	12.9	1.9	2.6	2.8	6.3	20.5	324.7	33.0	357.7
1977	116.6	36.9	32.8	79.9	14.6	2.8	2.5	2.4	7.4	21.0	316.8	37.8	354.6
1978	112.1	37.8	33.2	79.5	15.4	2.7	2.1	3.5	7.2	20.0	325.6[3]	40.7	366.3
1979	115.0	38.3	30.8	74.3	14.4	2.5	2.3	3.6	6.6	18.2	306.4	36.1	342.5
1980	96.8	37.9	28.2	67.2	13.7	2.1	2.0	2.2	3.9	19.2	273.1	29.8	302.9
1981	110.1	39.3	29.9	79.8	16.8	2.5	1.7	2.3	3.6	20.5	306.5	32.1	338.6
1982–3[1]	118.6	40.8	28.1	74.9	16.9	2.7	1.8	4.1	6.6	19.4	313.9	37.9	351.8
1983–4													

[1] Preliminary. [2] Hash, stews, soups. [3] Includes 12.0 sold for livestock feed & starch under the U.S.D.A. diversion program. *Source: Crop Reporting Board, U.S.D.A.*

T.531

Month End Open Interest of Potato Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	20,254	13,758	15,412	5,389	8,493	9,413	10,390	11,529	12,644	12,977	11,759	11,617
1979	12,083	13,789	863	1,030	1,655	2,336	3,786	4,516	4,323	4,898	5,307	3,993
1980	4,093	4,078	3,033	1,214	3,009	7,152	12,165	15,352	18,807	17,487	16,624	11,325
1981	11,722	7,489	1,106	2,214	2,956	4,142	4,969	5,460	4,971	3,707	3,674	3,243
1982	4,129	3,353	320	1,240	1,974	2,515	2,978	3,408	3,369	2,903	3,039	3,008
1983	3,494	2,809	689	605	666	639	638	547	422	186	79	46
1984[1]	1,449	1,498	1,191	665								

[1] Cash potato contract. *Source: N.Y. Mercantile Exchange*

T.532

Volume of Trading in Maine Potato Futures, on N.Y. Mercantile Exchange In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	55,269	44,671	45,075	53,844	12,859	18,487	19,670	41,255	36,754	48,503	38,099	38,643	453,129
1979	45,986	36,632	22,321	842	1,972	3,571	10,793	8,931	12,750	15,964	12,939	11,519	184,220
1980	13,849	12,656	14,443	9,650	5,853	20,483	47,611	52,794	60,988	62,081	48,084	45,267	293,759
1981	46,231	47,793	37,909	4,585	5,606	9,095	18,019	16,271	15,888	19,478	7,910	8,626	237,411
1982	10,058	13,180	8,198	2,868	2,703	4,065	5,818	3,634	3,603	6,530	3,706	2,959	67,322
1983	3,981	4,018	5,256	442	736	791	1,309	2,966	4,365	3,757	2,164	2,009	33,765
1984	1,930	1,894	3,161	2,793									

Source: New York Mercantile Exch.

T.526

U.S. Average Price Received by Farmers for Potatoes In Dollars Per Cwt.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.[1]
1972	1.84	1.81	1.83	1.80	1.99	2.37	3.68	3.08	2.41	2.13	2.55	2.76	3.01
1973	3.16	3.30	3.82	4.11	4.79	6.15	7.45	4.76	3.24	2.68	3.64	3.95	4.89
1974	4.88	6.23	7.08	7.96	8.11	6.43	5.59	4.78	4.05	4.09	3.88	3.51	4.01
1975	3.36	3.15	2.79	3.23	3.56	5.33	6.58	5.06	4.04	3.63	3.84	3.92	4.48
1976	4.61	4.64	4.95	5.22	5.10	4.44	4.35	3.86	3.20	3.17	3.04	3.10	3.59
1977	3.44	3.52	3.59	3.94	4.42	4.57	5.27	4.01	3.29	3.11	3.08	3.10	3.55
1978	3.24	3.20	3.25	3.30	3.84	5.32	6.71	4.92	3.49	3.07	3.08	3.07	3.38
1979	3.09	2.77	2.94	2.82	3.08	3.00	3.41	3.61	3.23	3.14	3.35	3.51	3.43
1980	3.44	3.37	3.23	3.21	3.74	4.36	5.91	7.64	6.42	4.38	5.42	6.60	6.55
1981	7.38	7.51	8.12	8.41	8.22	9.13	9.67	7.06	4.84	4.01	4.44	4.65	5.41
1982	4.71	4.78	5.03	5.59	6.21	7.11	6.52	5.80	4.25	3.78	3.73	3.71	4.45
1983[2]	3.53	3.69	4.07	4.65	5.50	5.34	6.41	7.20	5.05	4.22	4.79	5.30	5.69
1984[2]	6.10	6.28	6.45	6.94									

[1] Annual weighted average by sales. [2] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.*

T.530

Rapeseed

The Foreign Agricultural Service of the USDA, in March 1984, estimated 1983/84 world production of rapeseed at 14.7 million metric tons, about 3 percent below the record production of 15.1 million tonnes in the 1982/83 season. A 22 percent drop in estimated production in China, the world's largest producer, and a smaller reduction in EEC output more than offset production gains elsewhere. Production in Canada was up 19 percent despite drought-reduced yields, in response to low stocks and favorable prices.

Although China is the world's largest producer of rapeseed, Canada is by far the largest exporter—accounting for more than one-half of world exports in recent years. Japan purchased 89 percent of Canada's rapeseed exports in 1982/83 and was expected to account for as large a share again in 1983/84. Rapeseed planting intentions in Canada for the 1984/85 season were some 7 percent above 1983 plantings.

The 1983/84 world rapeseed crush was estimated by the USDA at 13.5 million tonnes, about 3 percent below the estimated 1982/83 crush. Ending stocks of rapeseed for the 1983/84 season were estimated at only 614 thousand tonnes, 7 percent below 1982/83 season ending stocks, and sharply below the 1.7 million tonne 1979/80–1982/83 average.

Estimated 1983/84 world rapeseed oil production of about 5.2 million tonnes was 4 percent below the 5.4 million tonnes produced in 1982/83 but 12 percent of total world edible oil output vs. less than 9 percent in 1974/75. Consumption was estimated at 5.2 million tonnes versus 5.3 million in 1982/83, and 1983/84 world ending stocks of rapeseed oil were projected by the USDA at only 144 thousand tonnes versus an estimated 171 thousand at the end of 1982/83. The U.S. Food & Drug Administration "unofficially" gave rapeseed oil "generally-regarded-as-safe" status for edible use, which is expected to bolster its use in the U.S. probably at the expense of soybean oil. According to the U.S. Agricultural Counselor in London in mid-1983, rapeseed oil has replaced soybean oil as the number one component in the manufacture of margarine and compound cooking fats in the United Kingdom.

World rapeseed meal production in the 1983/84 season was expected by the USDA to total around 8.2 million tonnes, about 3 percent below the estimated 8.5 million tonnes produced in 1982/83. Exports were expected to increase to around 833 thousand tonnes from a preliminary estimate of 762,000 tonnes in 1982/83. Trade reports indicate that India has become the world's largest exporter of rapeseed meal, with China also a major exporter, along with Canada. World stocks of rapeseed meal at the end of the 1983/84 season were expected to be drawn down to a relatively low 140 thousand tonnes.

Futures Market

Rapeseed futures are traded on the Winnipeg Commodity Exchange.

World Production of Rapeseed (In Thousands of Metric Tons)

Year[2]	Canada	China	Czechoslovakia	Denmark	France	E. Germany	W. Germany	India	Japan	Bangladesh	Pakistan	Poland	Sweden	Chile	World Total
1972	2,155	1,000	107.0	51	722.0	234.0	248.7	1,433	15.9	106.0	301.0	430.0	327.0	77.9	6,624
1973	1,300	1,050	117.0	92	661.0	246.0	242	1,808	13.0	98	287.0	512.0	339	35.0	7,001
1974	1,207	1,075	85	112	690	200	301	1,692	9	107	293	523	351	33	7,022
1975	1,163	1,090	115	115	532	250	194	2,300	7	110	305	726	327	55	7,989
1976	1,749			90	561							980	279		
1977	1,940	1,380		110	440			1,650			240	650	256		7,871
1978	3,497	1,868	166	91	568	301	322	1,860	5	137	243	691	330	65	10,798
1979	3,411	2,402	80	150	510	201	362	1,428	5	140	300	233	297	73	10,081
1980	2,484	2,384	214	225	1,103	308	380	2,002	5	140	300	572	373	75	11,107
1981[1]	1,837	4,065	200	290	990	284	363	2,363	4	130	250	496	282	12	12,370
1982[3]	2,246	5,656	179	370	1,155	275	35	2,472	4	130	275	432	305	12	15,083
1983[3]	2,676	4,400	240	350	1,073	300	603	2,700				588			14,697

[1] Preliminary. [2] Harvest generally occurs in the first half of the calendar year given in all major producing countries except Canada. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.533

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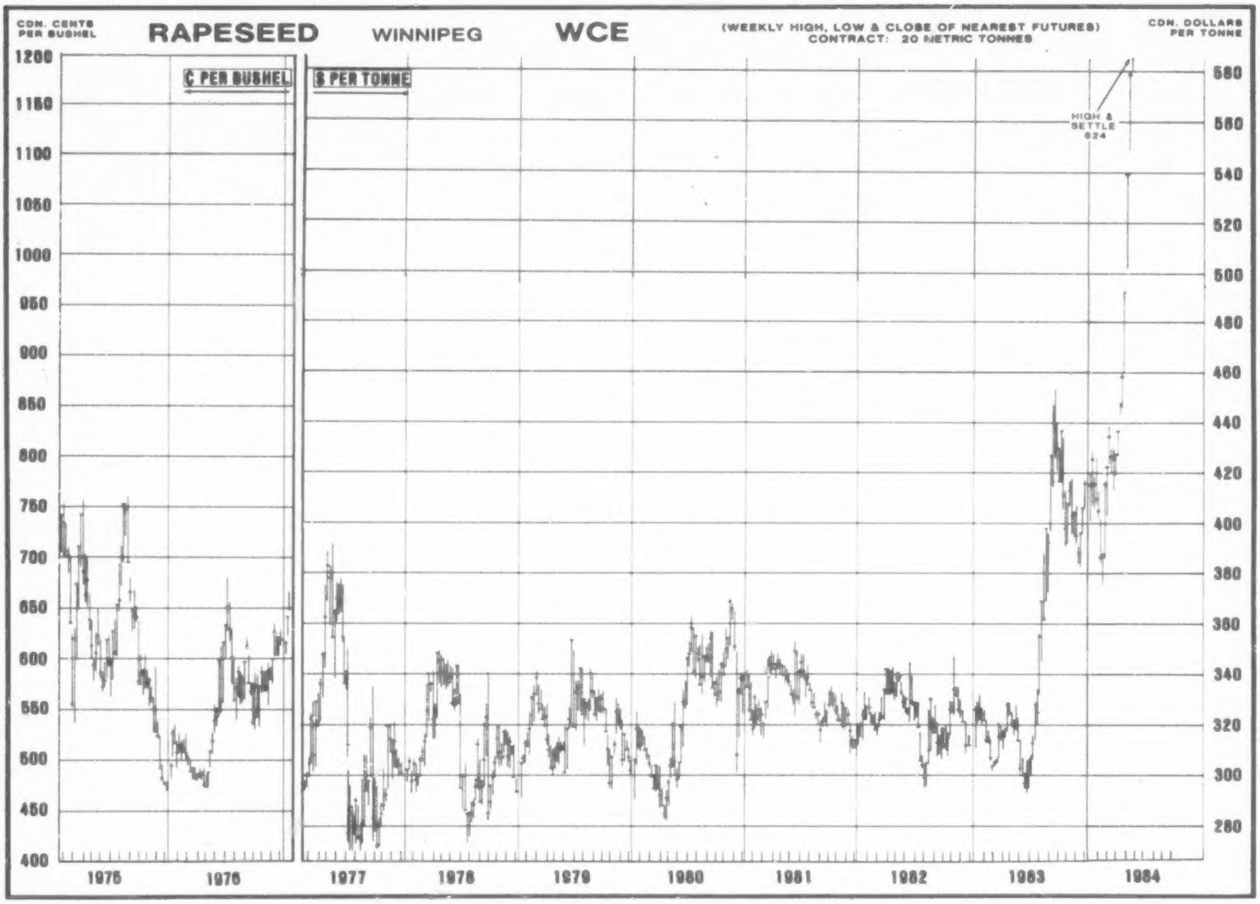


High, Low & Closing Prices of June Rapeseed Futures in Winnipeg In Dollars per Tonne

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	—	—	—	—	259.0	268.0	272.0	297.0	302.0	294.5	306.1	338.3	351.5	348.0	345.0	351.5
	Low	—	—	—	—	253.0	243.2	244.6	270.2	285.0	279.0	287.0	303.0	316.0	334.8	313.0	243.2
	Close	—	—	—	—	253.0	257.3	272.0	288.5	288.5	287.0	301.3	323.9	346.7	340.6	313.0	—
1979	High	—	286.0	284.0	268.0	284.0	288.0	312.8	304.0	307.5	315.5	340.2	337.7	318.4	316.5	354.5	354.5
	Low	—	278.5	263.7	255.8	258.0	269.0	282.1	289.5	296.0	294.0	314.4	314.0	301.8	306.0	302.5	255.8
	Close	—	286.0	265.2	263.0	270.1	280.0	302.3	300.0	297.0	314.5	336.0	316.3	307.3	307.5	329.5	—
1980	High	301.0	315.9	354.5	351.0	340.0	339.0	340.5	339.0	331.8	342.0	330.5	319.9	295.1	331.2	326.2	354.5
	Low	295.0	299.0	315.9	319.0	321.0	326.7	314.1	320.0	318.5	301.0	318.5	291.0	282.0	287.6	299.5	282.0
	Close	299.0	315.8	329.5	325.5	337.0	335.6	324.0	330.5	319.5	324.5	319.4	291.0	289.5	299.9	317.0	—
1981	High	—	—	—	370.0	383.5	389.0	382.5	375.5	387.5	375.9	351.8	350.6	350.5	348.3	338.3	389.0
	Low	—	—	—	367.5	360.0	365.0	359.1	391.0	325.5	334.0	337.9	334.5	340.0	337.4	326.0	325.5
	Close	—	—	—	367.5	372.5	368.5	376.0	387.0	368.0	337.0	345.8	350.0	347.5	339.1	327.2	—
1982	High	—	—	—	396.0	391.0	378.3	371.8	366.5	353.0	344.0	340.8	333.5	342.8	340.8	331.7	396.0
	Low	—	—	—	384.0	375.5	355.0	358.8	341.6	334.6	331.0	328.0	319.8	327.3	329.7	321.0	319.8
	Close	—	—	—	391.0	375.5	360.3	365.4	344.8	335.1	334.5	332.7	327.0	334.1	332.7	330.0	—
1983	High	—	—	—	—	361.0	366.3	345.5	349.1	340.0	335.9	329.0	321.0	329.3	328.1	308.5	366.3
	Low	—	—	—	—	346.0	332.0	332.6	339.6	322.3	323.1	311.5	311.8	311.0	309.5	292.8	292.8
	Close	—	—	—	—	354.2	337.0	342.5	340.3	325.6	329.1	311.7	316.0	324.7	309.9	297.2	—
1984	High	—	—	—	359.5	434.0	467.4	452.5	435.2	424.5	431.4	412.0	426.5	502.2			
	Low	—	—	—	330.0	364.5	415.5	409.0	406.1	397.3	406.5	382.9	403.0	426.0			
	Close	—	—	—	350.5	423.6	447.5	409.7	407.8	421.5	410.2	403.5	426.5	502.2			

Source: Winnipeg Commodity Exchange

T 536

RAPESEED

World Supply & Distribution of Rapeseed & Products In Thousands of Metric Tons

Crop Year	Rapeseed					Rapeseed Meal					Rapeseed Oil				
	Production	Exports	Imports	Crush	Ending Stocks	Production	Exports	Imports	Consumption	Ending Stocks	Production	Exports	Imports	Consumption	Ending Stocks
1979-80	10,081	2,102	2,403	8,714	1,708	5,206	520	640	5,316	149	3,365	643	571	3,295	159
1980-81	11,107	2,305	2,339	10,451	1,489	6,237	804	639	6,022	199	4,042	824	729	3,959	147
1981-82	12,370	2,169	2,233	12,018	865	7,297	824	683	7,209	146	4,615	816	765	4,557	154
1982-83[1]	15,083	2,401	2,564	14,028	742	8,475	770	870	8,505	216	5,361	816	799	5,313	185
1983-84[1]	14,697	2,479	2,683	13,771	585	8,342	868	999	8,481	208	5,242	901	847	5,222	151
1984-85															

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.534a

Wholesale Price of Rapeseed Oil, Refined (Denatured), in Tanks at N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1973	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1974	17.5	18.4	21.0	21.0	30.6	45.0	45.0	45.0	46.2	47.5	45.8	59.0	36.8
1975	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	51.2	46.0	46.0	56.2
1976	46.0	46.0	46.0	46.0	46.0	46.0	46.0	44.2	39.0	39.0	39.0	39.0	43.5
1977	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1978	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1979	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1980	47.0	47.0	47.0	47.0	47.0	47.0	47.0	46.0	46.0	46.0	46.0	46.0	46.6
1981	56.4	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	58.8
1982	57.0	55.0	56.8	57.5	56.0	56.0	56.0	56.0	55.7	55.3	55.3	55.3	50.0
1983	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
1984													

Source: Economic Research Service, U.S.D.A. T.534

Month-End Open Interest of Rapeseed Futures in Winnipeg In 20 Tonne Units

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	9,288	11,435	11,869	11,908	14,442	14,300	17,778	20,456	17,960	18,672	16,707	15,299
1979	15,288	15,164	16,338	15,593	12,993	14,209	12,950	13,596	15,001	21,300	21,827	21,966
1980	15,718	17,516	13,392	14,285	17,722	17,254	17,126	17,108	18,827	22,036	21,911	20,504
1981	15,376	15,326	18,028	18,764	18,000	15,332	14,948	15,316	15,755	16,064	16,260	12,911
1982	13,532	14,970	9,952	12,230	15,997	11,554	12,623	16,948	13,904	15,503	17,992	20,555
1983	16,288	17,964	18,266	16,681	15,327	13,834	18,249	22,681	20,481	18,778	18,302	17,554
1984	14,170	16,807	13,980	13,743								
1985												

Source: Winnipeg Commodity Exchange T.535

Rayon and Other Synthetic Fibers

World Production of Rayon &/or Acetate Filament Yarn & Monofilaments In Thousands of Metric Tons

Year	United States	Bel./Netherlands	Brazil	Canada	France	W. Germany	E. Germany	Un. Kingdom	Italy	Japan	India	Poland	Spain	China	USSR	World Total
1971	341.4	47.7	33.6	15.1	52.8	75.1	34.0	85.2	83.1	120.9	55.2	28.8	22.5	20.0	230.0	1,401
1972	296.2	47.2	36.7	15.2	49.8	70.6	32.0	67.2	67.8	119.0	61.3	29.2	21.8	22.0	245.3	1,342
1973	288.2	47.1	40.8	15.1	49.2	71.1	33.0	72.6	66.4	128.3	56.8	30.1	21.6	26.4	259.3	1,362
1974	241.9	47.9	35.9	14.6	42.1	69.4	34.0	70.1	54.2	115.6	56.9	30.5	22.0	44.5	267.0	1,302
1975	166.1	35.3	30.7	13.1	28.1	48.8	32.9	62.5	41.3	103.2	54.2	28.3	16.4	49.0	281.4	1,136
1976	160.8	39.0	34.2	5.7	24.4	66.3	36.2	70.6	46.7	109.3	60.6	28.7	15.6	55.0	286.1	1,188
1977	160.0	36.2	28.8	11.0	20.8	63.7	36.0	62.6	44.4	107.4	58.9	28.6	15.0	61.0	295.0	1,172
1978	164.6	36.0	24.1	12.3	19.3	59.7	34.0	59.7	39.3	109.8	62.4	28.0	13.8	65.0	300.0	1,167
1979	169.4	36.1	24.4	14.1	18.5	58.1	35.0	59.2	38.4	114.3	60.5	27.2	12.6	68.0	298.0	1,176
1980	161.3	37.4	26.0	14.0	16.4	65.2	36.5	36.7	36.6	119.3	57.7	25.4	12.8	75.0	305.0	1,161
1981	138.6	38.3	21.0	13.5	11.0	65.0	37.0	27.0	35.1	118.7	55.9	19.5	12.6	80.0	300.0	1,104
1982[1]	103.4	38.1	20.8	9.5	8.6	61.0	34.0	24.0	31.6	120.5	53.8	19.3	11.3	80.0	294.4	1,032
1983[2]	161.8															

[1] Preliminary. [2] Estimate. *Source: Textile Organon*

T.537

World Production of Rayon &/or Acetate Staple & Tow In Thousands of Metric Tons

Year	United States	Austria	China	Czechoslovakia	France	W. Germany	E. Germany	Un. Kingdom	Italy	Japan	Poland	Spain	Sweden	India	USSR	World Total
1971	289.5	75.3	25.0	48.1	79.0	89.5	121.0	161.5	95.7	354.4	53.5	38.3	31.8	61.0	243.0	2,054
1972	336.2	82.6	27.4	48.9	84.5	73.0	130.0	172.8	99.7	367.9	59.7	45.7	33.3	70.7	262.4	2,217
1973	327.3	86.1	32.9	45.6	86.2	80.0	132.5	191.4	94.2	383.4	65.1	45.8	33.9	63.2	283.8	2,298
1974	301.8	88.6	55.4	50.5	83.7	80.0	132.0	147.1	85.4	328.7	66.6	46.0	32.6	77.6	301.6	2,230
1975	173.7	74.0	61.0	49.6	55.3	43.0	135.6	126.7	46.3	255.6	67.4	35.8	18.5	67.1	309.0	1,824
1976	220.6	88.9	70.0	50.3	60.3	51.0	136.8	118.6	59.8	250.3	66.9	41.0	30.4	83.7	325.8	2,022
1977	242.7	90.2	77.0	50.6	60.7	46.0	131.0	113.6	62.3	272.7	67.1	43.1	33.1	87.1	334.0	2,109
1978	245.7	96.0	80.0	49.5	55.2	49.0	129.2	124.4	46.9	279.4	65.4	46.6	36.9	92.0	335.0	2,151
1979	252.4	98.8	85.0	36.0	58.9	50.0	130.0	139.2	39.0	290.4	56.6	45.3	36.9	92.2	337.0	2,195
1980	204.3	100.6	95.0	34.9	49.6	46.0	132.0	109.3	27.5	278.0	61.0	40.1	34.9	74.7	345.0	2,081
1981	210.7	107.9	105.0	36.0	42.9	50.0	132.0	102.4	24.4	273.5	44.4	37.8	34.7	94.5	345.5	2,100
1982[1]	161.5	100.8	105.0	35.5	36.9	50.0	125.2	89.2	14.2	258.8	45.1	31.8	38.0	50.3	340.5	1,917
1983[2]	180.1															

[1] Preliminary. [2] Estimate. *Source: Textile Organon*

T.538

World[5] Production of Non-Cellulosic Man-Made Fibers (Except Olefin) In Thousands of Metric Tons

	United States															
		Non-Cellulose Fiber[2]														
Year	Text. Glass Fiber[1]	Yarn[3]	Staple[4]	Total	Total[5]	Canada	France	W. Germany	Italy/Malta	Taiwan	Japan	Korea	Benelux	USSR	United Kingdom	World Total
1971	212	873.7	929.2	1,803	2,015	74.7	213.9	599.9	277.3	77.0	1,103	61.6	138.3	203.0	357.5	5,609
1972	259	1,101	1,142	2,243	2,501	75.3	237.9	639.6	291.6	102.1	1,054	81.6	149.2	238.6	373.9	6,377
1973	312	1,323	1,318	2,641	2,953	93.6	266.3	808.4	336.7	128.0	1,247	115.7	163.2	286.9	[illegible]	7,639
1974	310	1,352	1,233	2,585	2,894	92.0	237.7	764.9	296.7	142.8	1,126	151.7	155.3	318.5	396.1	7,487
1975	248	1,255	1,191	2,446	2,693	95.8	204.5	625.3	276.9	234.6	1,021	262.7	122.9	362.0	361.1	7,353
1976	307	1,266	1,480	2,746	3,052	96.6	248.8	759.4	376.6	272.4	1,204	309.3	146.3	400.0	414.2	8,601
1977	357	1,415	1,622	3,037	3,392	112.8	243.9	690.2	330.1	364.4	1,280	349.9	139.3	456.0	358.8	9,149
1978	419	1,467	1,751	3,218	3,637	123.1	246.4	729.4	354.4	464.2	1,376	432.5	142.7	475.0	406.4	10,034
1979	460	1,595	1,889	3,484	3,944	121.6	224.0	759.5	360.2	521.3	1,363	477.3	135.6	476.0	381.1	10,608
1980	393	1,412	1,831	3,243	3,636	122.0	192.0	720.1	354.8	557.8	1,357	536.4	104.3	550.0	287.6	10,492
1981	472	1,439	1,837	3,276	3,748	105.9	201.2	752.2	435.3	587.0	1,329	610.4	105.7	572.8	249.3	10,810
1982[6]	408	1,121	1,482	2,603	3,011	97.0	190.1	667.0	428.7	630.9	1,304	612.4	80.2	593.8	204.3	10,100
1983[7]	500	1,400	1,700													

[1] Textile glass fiber of all types, including some staple. [2] Acrylic fiber, nylon, polyester, saran, etc. [3] Includes monofilaments as well as some saran staple. [4] Includes tow, but does not include some saran staple. [5] The textile glass fiber data are included in the U.S. total & excluded from the rest of the world data. [6] Preliminary. [7] Estimate. *Source: Textile Organon*

T.539

RAYON AND OTHER SYNTHETIC FIBERS

U.S. Rayon and Acetate Distribution In Millions of Pounds

	Yarn & Monofilaments								Staple & Tow & Fiber Fill						
	Producers' Shipments								Producers' Shipments						
	To Domestic Consumers								To Domestic Consumers						
Year	Industrial	Textile	Acetate	Total	Export	Total	Import	Domestic Consump.	Rayon	Acetate	Total	Export	Total	Import	Domestic Consump.
1971	164.5	132.5	432.3	729.3	33.2	762.5	5.2	734.5	643.6	26.2	669.8	3.7	673.5	81.3	751.1
1972	141.1	105.8	385.9	632.8	23.9	656.7	10.8	643.6	690.7	27.7	718.4	2.0	720.4	51.3	769.7
1973	121.8	75.8	392.3	589.9	60.7	650.6	18.1	608.0	709.5	25.0	734.5	14.7	749.2	47.4	781.9
1974	99.4	53.7	320.3	473.4	48.8	522.2	9.2	482.6	569.5	19.7	589.2	36.0	625.2	38.7	627.9
1975	74.9		293.7	368.6	32.9	401.5	9.2	377.8	373.4	12.0	385.4	20.2	405.6	37.9	423.3
1976	65.1		249.4	314.5	40.3	354.8	25.1	339.6	461.0	11.0	472.0	35.6	507.6	43.2	515.2
1977	68.1		259.4	327.5	25.2	352.7	23.5	351.0	444.9	8.0	452.9	62.3	515.2	57.8	510.7
1978	63.0		274.6	337.6	28.6	365.2	25.7	363.3	459.2	7.0	466.2	96.5	562.7	41.1	507.3
1979	55.0		288.4	343.4	31.8	375.2	13.3	356.7	442.4	7.0	449.4	100.1	549.5	16.5	465.9
1980	47.5		269.2	316.7	32.7	349.4	8.3	325.0	390.7	7.0	397.7	61.0	458.7	10.3	408.0
1981	46.6		226.3	272.9	34.8	307.7	10.7	283.6	396.9	4.0	400.9	59.8	460.7	16.8	417.7
1982	30.1		169.0	199.1	29.8	228.9	7.0	206.1	293.7	1.0	294.7	66.5	361.2	13.4	308.1
1983[1]	25.3		197.6	222.9	28.2	251.1	8.7	231.6	333.5	1.4	334.9	43.9	378.8	13.6	348.5
1984															

[1] Preliminary. *Source: Textile Organon*

T.540

U.S. Domestic Shipments of Synthetic Fibers In Millions of Pounds

	Yarn & Monofilaments								Staple & Tow							
	Cellulosic				Non-Cellulosic					Non-Cellulosic						
	Rayon															
Year	Industrial	Textile	Acetate	Total	Nylon	Olefin[2]	Polyester & Other	Total[3]	Rayon	Nylon	Acrylic & Mod-Acrylic	Olefin & Vinyon	Polyester	Total	Textile Glass Fiber
1971	164.5	132.5	432.3	729.3	1,207	246.5	646.3	2,100	643.6	330.1	463.7	58.9	1,111	1,964	466.7
1972	141.1	105.8	385.9	632.8	1,431	312.4	946.8	2,690	690.7	476.6	536.0	63.6	1,287	2,363	569.2
1973	121.8	75.8	392.3	589.9	1,545	395.4	1,334	3,274	709.5	586.8	662.0	69.3	1,530	2,848	676.0
1974	99.4	53.7	320.3	473.4	1,409	426.3	1,307	3,142	569.5	487.8	514.9	59.7	1,388	2,451	630.8
1975	74.9		293.7	368.6	1,290	436.1	1,489	3,215	373.4	557.9	467.3	54.7	1,474	2,554	533.5
1976	65.1		249.4	314.5	1,279	482.0	1,386	3,147	461.0	665.0	517.3	58.6	1,777	3,019	677.6
1977	68.1		259.4	327.5	1,396	539.6	1,526	3,461	444.9	791.7	619.8	81.3	1,880	3,373	791.6
1978	63.0		274.6	337.6	1,539	579.7	1,523	3,642	459.2	876.4	571.6	90.0	1,968	3,506	886.7
1979	55.0		288.4	343.4	1,631	624.2	1,525	3,798	442.4	913.2	546.6	119.3	2,134	3,714	922.6
1980	47.5		269.2	316.7	1,539	611.7	1,363	3,532	390.7	711.2	585.3	115.0	2,071	3,483	874.4
1981	46.6		226.3	272.9	1,404	628.3	1,430	3,483	396.9	696.4	494.1	132.0	2,005	3,328	982.0
1982	30.1		169.0	199.1	1,166	577.0	1,135	2,894	293.7	673.3	457.9	138.9	1,768	3,038	875.6
1983[1]	25.3		197.6	222.9	1,392	698.6	1,294	3,385	333.5	897.1	492.2	183.4	2,099	3,672	1,166.1
1984															

[1] Preliminary. [2] Includes film fiber. [3] Includes Saran & Spandex. *Source: Textile Organon*

T.541

U.S. Mill Consumption of Fiber & Products & Per Capita Consumption

	Mill Consumption (Million Pounds)											Per Capita Consumption (Pounds)			
Year	Yarn & Monofilaments	Staple & Tow	Total R. & A.[2]	Noncellulosic Fiber	Textile Glass Fiber	Waste	Total Man-made[3]	Cotton	Wool	Silk	Grand Total	Man-made	Cotton	Wool	Total
1971	734.5	751.1	1,486	4,557	466.7	185.0	6,204	3,965	219.3	1.7	10,390	32.9	20.4	1.3	54.6
1972	643.6	769.7	1,414	5,568	569.2	202.1	7,155	3,850	246.9	2.1	11,254	37.5	19.9	1.3	58.7
1973	608.0	781.9	1,390	6,599	676.0	223.3	8,146	3,643	182.1	3.3	11,974	41.7	18.3	1.0	61.0
1974	482.6	627.9	1,111	5,960	630.8	198.6	7,222	3,306	116.5	2.6	10,647	35.9	16.0	.7	52.6
1975	377.8	423.3	801.1	6,081	533.5	204.6	7,003	3,069	132.0	1.0	10,205	34.7	14.9	.7	50.3
1976	339.6	515.2	854.8	6,520	677.6	223.1	7,512	3,389	145.9	2.8	11,050	37.5	16.9	.9	55.3
1977	351.0	510.7	861.7	7,228	791.3	254.6	8,237	3,170	133.9	1.6	11,543	41.1	15.8	.9	57.8
1978	363.3	507.3	870.6	7,461	886.7	210.3	8,495	3,040	141.6	2.0	11,679	42.4	15.8	1.0	59.2
1979	356.7	465.9	822.6	7,692	922.6	130.4	8,697	3,066	134.4	1.5	11,899	41.6	14.8	.9	57.3
1980	325.0	408.0	733.0	7,145	874.4	83.0	8,064	3,064	137.8	1.5	11,267	37.5	14.7	.9	53.1
1981	283.6	417.7	701.3	7,007	982.0	129.8	7,862	2,731	152.7	2.0	10,748	37.8	11.9	.7	50.4
1982	206.1	308.1	514.2	6,131	875.6	132.8	6,775	2,479	129.5	2.0	9,386	32.5	10.7	.5	43.7
1983[1]	231.6	348.5	580.1	7,396	1,166.1	197.2	8,154	2,796	162.5	2.0	11,114				
1984															

[1] Preliminary. [2] Rayon and acetate. [3] Man-made fiber data include only glass fiber for textile end uses. *Source: Textile Economics Bureau*

T.542

Man-Made Fiber Production in the United States In Millions of Pounds

	Rayon & Acetate														Producers' Waste — Shipments —	
	Rayon Yarn				Staple & Tow				Non-Cellulosic Fiber							
Year	Indust.	Textile	Acet. Yarn	Total Yarn	Rayon	Acetate	Total	Total	Yarn	Staple	Total	Total Ray. & Acet. & Non-Cel.	Textile Glass Fiber	Total Man-made Fiber	Rayon	Non-Cell.
1972	146.7	105.0	401.4	653.1	713.2	28.0	741.2	1,394.3	2,773.3	2,582.4	5,355.7	6,750.0	571.6	7,321.6	38.5	202.7
1973	121.7	76.4	437.2	635.3	696.7	25.0	721.7	1,357.0	3,339.6	2,969.8	6,309.4	7,666.4	688.0	8,354.4	36.8	274.8
1974	112.9	58.9	361.6	533.4	645.4	20.0	665.4	1,198.8	3,443.0	2,780.6	6,223.6	7,422.4	682.9	8,105.3	29.9	246.4
1975	46.1	18.7	301.3	366.1	370.9	12.0	382.9	749.0	3,208.0	2,676.8	5,885.7	6,634.7	546.5	7,181.2	13.2	228.7
1976	52.3	15.3	286.9	354.5	475.4	12.0	486.4	840.9	3,306.4	3,320.2	6,626.6	7,467.5	676.0	8,143.5	14.7	262.3
1977	55.3	15.4	282.0	352.7	527.0	8.0	535.0	887.7	3,674.1	3,653.8	7,327.9	8,215.6	786.7	9,002.3	18.5	291.0
1978	47.0	15.0	300.9	362.9	534.6	7.0	541.6	904.5	3,830.3	3,952.7	7,783.0	8,687.5	923.3	9,610.8	15.7	263.9
1979	41.7	15.1	316.6	373.4	549.4	7.0	556.4	929.8	4,154.3	4,282.3	8,436.6	9,336.4	1,014.4	10,380.8	17.2	238.6
1980	32.2	15.0	308.5	355.7	443.3	7.0	450.3	806.0	3,744.3	4,148.2	7,892.5	8,698.5	867.3	9,565.8	13.5	170.2
1981	33.4	15.1	257.0	305.5	460.6	4.0	464.6	770.1	3,814.8	4,191.1	8,005.9	8,776.0	1,041.1	9,817.1	15.3	174.2
1982	20.8	12.4	195.2	228.4	355.0	1.0	356.0	584.4	3,057.4	3,402.5	6,459.9	7,044.3	899.2	7,943.5	10.7	173.2
1983[1]	15.3	11.2	227.6	254.1	374.8	1.4	376.2	630.3	3,567.8	3,970.6	7,538.4	8,168.7	1,168.5	9,337.2	9.4	214.1
1984																

[1] Preliminary. *Source: Textile Organon*

T.543

United States Imports of Man Made Fiber Manufactures In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	39.34	37.03	37.20	29.61	33.64	30.97	29.45	23.54	17.91	22.73	20.25	13.37	335.35
1974	26.30	25.10	25.76	27.12	31.12	33.45	38.37	36.53	31.53	35.88	31.03	28.49	371.25
1975	28.77	24.38	28.76	27.85	30.03	35.69	40.32	37.93	37.97	41.04	35.15	33.67	400.38
1976	36.38	29.56	36.71	35.57	38.84	47.48	54.32	46.68	41.67	36.88	40.68	34.55	479.32
1977	34.20	32.55	37.00	36.29	43.86	59.03	54.82	55.44	51.85	46.69	37.57	41.83	531.13
1978	45.54	46.68	46.34	53.87	49.74	67.70	70.41	64.90	58.31	50.47	41.08	37.54	642.59
1979	47.07	36.31	39.06	38.47	45.19	53.03	52.25	50.84	44.58	42.35	40.18	35.64	524.97
1980	36.39	39.90	39.62	37.37	46.72	55.92	57.69	50.18	52.11	49.18	40.10	35.46	540.64
1981	46.72	38.55	43.81	45.53	57.83	58.01	66.66	69.32	56.77	67.24	49.12	39.51	639.08
1982	53.18	48.07	47.74	40.14	67.85	91.93	77.34	100.05	82.75	70.14	68.76	59.16	807.10
1983	79.98	71.92	76.53	73.20	86.99	105.55	98.14	108.25	98.34	106.84	85.63	77.93	1,069.5
1984													

Source: Department of Commerce

T.544

United States Exports of Man Made Fiber Manufactures In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	37.95	41.86	43.28	48.23	48.11	46.50	45.33	38.30	56.64	54.96	52.24	55.66	569.27
1974	31.00	33.70	38.34	39.82	37.03	37.22	30.46	30.88	30.17	30.66	28.05	23.50	390.73
1975	22.84	20.83	24.50	31.56	27.85	25.73	24.67	27.07	29.20	32.31	28.62	28.55	323.73
1976	26.13	27.22	32.09	29.11	30.14	29.91	25.99	25.59	31.78	30.76	31.33	32.12	352.17
1977	27.67	30.77	34.18	32.02	31.77	31.55	29.36	27.08	35.02	25.81	27.50	34.35	367.08
1978	27.84	29.24	36.83	35.57	39.06	36.63	32.06	35.38	38.12	43.68	44.41	42.88	441.70
1979	42.86	43.91	53.20	45.03	49.28	52.81	44.92	46.69	50.61	56.16	53.00	58.12	596.58
1980	47.25	59.36	69.55	69.01	64.85	70.85	58.44	63.79	63.29	75.94	64.97	64.27	771.54
1981	53.16	53.50	67.33	64.83	58.05	58.78	47.59	49.70	48.77	50.98	46.95	38.08	637.73
1982	34.90	38.35	39.72	35.96	42.01	44.21	33.93	33.13	35.86	36.87	32.54	31.08	438.55
1983	37.97	36.34	43.40	43.45	40.39	39.80	35.00	36.21	39.50	36.97	36.44	35.24	460.71
1984													

Source: Department of Commerce

T.545

Rice

The 1983/84 world rough rice crop was forecast at a record 439 million tonnes, up some 4 percent from 1982/83. U.S. production, which accounts for less than 2 percent of the world crop, was off more than a third from a year earlier. India's crop was forecast to rise more than 20 percent from the drought-plagued 70 million tonnes produced in 1982/83. China, Bangladesh, Thailand, and Brazil likewise forecast production increases for 1983/84. World rice consumption during 1983/84 was forecast at a record 298 million tonnes, milled basis, up 3 percent from the previous year. But the world rice trade, on a calendar year basis was forecast to decline from 11.9 million tonnes in 1983 to 11.7 million in 1984. About two-thirds of the expected drop was attributed to a continued decline in U.S. exports. Thai rice exports were expected to continue at the previous year's record level of 3.7 million tonnes. World ending stocks were forecast to decline again, from 16.7 million tons in 1982/83 to 16.4 million in 1983/84. However, this increase was expected to be more than offset by a possible significant drop in the U.S. carryover. The rest of the world was expected to see ending stocks rise slightly to 14.8 million tonnes.

U.S. acreage harvested for rice dropped to 2.17 million acres in 1983/84, the lowest in a decade due to record enrollment in the acreage reduction and Payment-In-Kind (PIK) programs. At the same time, bad weather kept yields from rising, and in most states, caused modest declines in yields. The average U.S. yield dipped 2 percent from 1982 and 5 percent from the record yield of 1981. As a result, U.S. production posted a low for the decade, falling to 99.7 million cwt. in 1983, 35 percent under the 1982 level and 45 percent below the 1981 record.

The 1983/84 season began with a record 71.5 million cwt. of rice in U.S. stocks—of which approximately 40 million were slated to be returned to producers for Payment-In-Kind program participation. The carryin brought total U.S. rice supplies to 172 million cwt., enough to leave a substantial carryover. As of January 1, 1984, on-farm storage of rice totaled 30.5 million cwt. vs. nearly 35 million the previous year. The July 31, 1984 carryover was expected to fall below 40 million cwt.—a 44 percent drop from 71.5 million as of July 31, 1983.

A 25-percent acreage reduction program was announced for 1984-crop U.S. rice, and strong participation was expected. Producers complying with the program provisions were to be eligible for support with a target price set at $11.90 per cwt. The program also included a loan rate of $8.00 per cwt., at the statutory minimum level.

In February 1984, in response to the announcement of the 1984 program, producers said that they intended to plant 2.8 million acres to rice in 1984—nearly 30 percent more than under the 1983 Payment-In-Kind program, but still substantially less than the 1981 planted acreage.

Assuming normal weather, producers' planting intentions could result in 1984/85 rice production increasing 30 percent over the 1983/84 crop. However, the 1983/84 draw-down in stocks from 71.5 million cwt. to around 40 million indicated that total rice supplies would not vary dramatically from 1983/84. Carryover in 1984/85 was expected to depend essentially upon exports because of projections of a relatively constant domestic demand.

Futures Markets

Following the "merger" of the New Orleans Commodity Exchange in 1983, trading in rice futures is now provided for on the MidAmerica Commodity Exchange, Chicago.

World Rice[3] Supply & Distribution In Millions of Metric Tons

Year	Production			Exports			Imports			Utilization			Stocks (End)		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
1980	6.0	371.4	377.4	3.0	9.8	12.7	—	12.7	12.7	1.8	260.1	261.9	.8	22.5	23.3
1981	6.6	392.2	398.8	3.0	10.0	13.0	—	13.0	13.0	2.1	270.1	272.2	.5	21.5	22.1
1982[1]	8.3	404.3	412.5	2.5	9.3	11.8	—	11.8	11.8	2.2	279.2	281.4	1.6	19.6	21.2
1983[1]	7.0	412.8	419.7	2.3	9.6	11.9	—	11.9	11.9	2.0	288.2	290.3	2.3	14.4	16.7
1984[2]	4.5	434.5	439.0	2.0	9.7	11.7	—	11.7	11.7	2.2	296.8	298.9	1.4	15.0	16.4

[1] Preliminary. [2] Forecast. [3] Production is on rough basis; the rest are on milled basis. *Source: Foreign Agricultural Service, U.S.D.A.* T.547a

World Production of Rough Rice In Millions of Metric Tons

Crop Year	Brazil	Burma	China	Vietnam[3]	India	Japan	Indonesia	Rep. of Korea	Bangladesh	Philippines	Pakistan	Taiwan	Thailand	United States	World Total
1973–4	6.4	8.6	113.0	6.6	66.1	15.2	21.5	5.8	17.6	5.6	3.7	2.8	14.4	4.2	324.3
1974–5	7.0	8.6	120.0	11.9	59.4	15.4	22.5	6.2	17.1	5.7	3.5	3.3	14.5	5.1	330.0
1975–6	8.5	9.2	119.0	10.9	74.3	16.5	22.6	6.5	18.8	5.8	3.9	3.4	15.2	5.8	352.3
1976–7	8.0	9.3	125.5	11.5	64.2	14.7	23.3	7.2	17.7	6.5	4.0	3.6	15.8	5.3	348.2
1977–8	7.5	9.3	128.5	11.3	79.1	16.4	23.3	8.3	19.5	6.9	4.4	3.6	15.0	4.5	370.1
1978–9	7.6	10.6	136.9	10.0	80.7	15.7	25.8	8.3	19.3	7.2	4.9	3.2	17.5	6.0	386.5
1979–0	9.6	9.8	143.8	10.7	63.6	14.9	26.3	7.3	19.1	7.3	4.8	3.2	15.8	6.0	377.4
1980–1	8.6	13.2	139.9	11.7	80.5	12.2	29.7	5.0	20.8	7.7	4.7	2.9	17.4	6.6	398.8
1981–2	9.2	13.6	144.0	12.6	80.5	12.8	32.8	7.1	20.5	8.1	5.1	3.1	17.8	8.3	412.5
1982–3[1]	7.8	14.4	161.2	13.8	69.8	12.8	34.1	7.3	21.6	8.3	5.2	3.1	17.0	7.0	419.7
1983–4[2]	9.0	13.9	163.0		85.6	13.0	34.3	7.4	22.5		5.3		18.0	4.5	439.0

[1] Preliminary. [2] Estimate. [3] Data prior to 1974–5 are for So. Vietnam. *Source: Foreign Agricultural Service, U.S.D.A.* T.547

World Exports of Rice (Milled Basis), by Country of Origin In Thousands of Metric Tons

Year	Australia	Brazil	Guyana	Burma	China (mainland)	Egypt (U.A.R.)	Uruguay	Pakistan	EC-10	Japan	Nepal	Taiwan	Thailand	United States	World Total
1971	186	129	66	800	622	515		197				34	1,576	1,415	7,695
1972	154	102	54	244	1,976	298	62	789				16	849	1,733	7,547
1973	158	33	49	133	2,096	298	65	771				49	849	1,630	7,439
1974	145	57	52	206	1,982	136	73	478				5	1,046	1,702	7,908
1975	185	3	83	288	1,440	104	91	498				—	933	2,070	7,162
1976	218	76	72	636	1,446	191	115	945			15	0	1,870	2,045	9,055
1977	260	408	67	686	1,023	223	120	757		50	105	150	2,915	2,270	10,442
1978	337	177	106	375	1,373	150	100	703		75	85	238	1,573	2,264	9,413
1979	400	—	86	590	1,053	95	115	1,366	744	564	100	409	2,696	2,267	11,590
1980	321	—	81	675	1,116	178	165	971	804	653	10	261	2,700	2,977	12,731
1981	335	—	78	674	583	134	215	1,127	624	795	43	92	3,049	3,008	12,940
1982[1]	530	—	35	701	460	22	227	794	823	318	50	307	3,620	2,487	11,809
1983[2]	350		45	850	550	35	171	1,299	839	721	0	550	3,700	2,330	12,100

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.552

Salient Statistics of Rice, Rough & Milled (Rough Equivalent) in the United States In Thousands of Cwt.

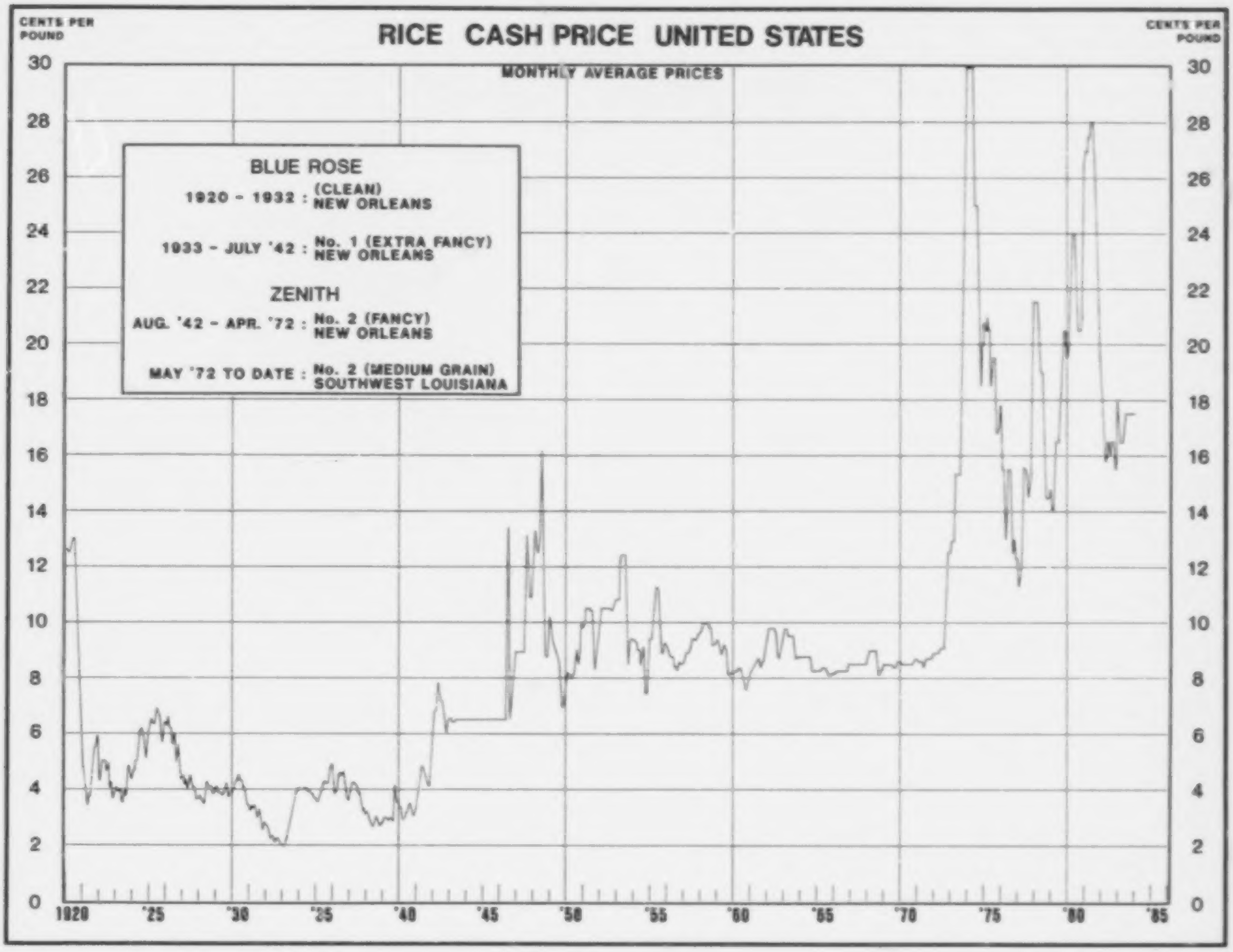
Year Beginning August	Supply				Distribution					Government Support Program					
					Domestic					Owned By CCC Aug. 1	Under Price Support			Deliveries to CCC	Support Rate $ Cwt.
	Stocks Aug. 1	Production	Imports[2]	Total Supply	Food[3]	Industry[4]	Seed	Total	Exports		Loans	Purchase Agree.	Total		
1971–2	18,634	85,768	1,100	105,500	25,500	7,400	2,500	35,400	56,900	9,329	31,235	107	31,342	1,214	5.07
1972–3	11,434	85,439	500	97,400	25,100	7,700	3,032	35,700	54,000	2,720	22,926	—	22,926	1	5.27
1973–4	5,139	92,765	200	98,100	26,100	8,100	3,609	37,800	49,700	148	19,146	—	19,146	—	6.07
1974–5	7,842	112,386	—	120,300	28,600	8,400	4,000	41,000	69,500	—	9,256	—	9,256	1	7.54
1975–6	7,057	128,437	—	135,500	27,700	9,100	3,500	40,300	56,500	—	21,475	1,781	23,256	19,214	8.52
1976–7	36,877	115,648	100	152,600	29,200	10,300	3,200	42,700	65,600	19,214	23,425	608	24,033	7	6.19
1977–8	40,501	99,223	100	139,800	23,500	9,900	4,300	37,700	72,800	18,610	19,541	—	19,541	—	6.19
1978–9	27,398	133,170	100	160,700	33,700	11,200	4,300	49,200	75,700	10,772	27,114	—	27,114	—	6.40
1979–0	31,618	131,947	100	163,600	33,200	11,200	4,800	49,200	82,600	8,300	25,911	—	25,911	—	6.79
1980–1	25,679	146,150	—	172,100	38,400	11,000	5,100	64,200	91,400	1,700	24,973	—	24,973	—	7.12
1981–2[1]	16,493	182,742	—	199,500	42,300	12,700	4,400	68,600	82,000	—	42,848	—	42,848	17,500	8.01
1982–3[5]	49,000	153,588	—	203,300	44,000	13,800	3,200	62,900	68,900	17,500	65,375	—	65,375	6,120	8.14
1983–4[5]	71,500	99,720		171,900				67,000	65,000	22,320					8.14
1984–5[5]	39,000														

[1] Preliminary. [2] Consists mostly of broken rice. [3] Includes shipments to territories and military food use. [4] Primarily for beer-production. [5] Projected. *Source: Agricultural Marketing Service, U.S.D.A.* T.551

Acreage, Yield, Production, and Prices of Rice in the United States

Crop Year	Acreage Harvested (1,000 Acres)			Yield Per Harvested Acre (In Lbs.)			Production 1,000 Cwt.			Farm Value of Production $1,000	Farm Price of Rough Rice $ Per Cwt.	Wholesale Prices ($ Per Cwt.)	
	Southern States	California	United States	Southern States	California	United States	Southern States	California	United States			Arkansas[2]	Houston[3]
1971–2	1,487	331	1,818	4,513	5,200	4,718	68,556	17,212	85,768	457,697	5.34	9.15	10.20
1972–3	1,487	331	1,818	4,415	5,700	4,700	66,571	18,868	85,439	574,907	6.73	13.55	14.45
1973–4	1,769	401	2,170	3,970	5,616	4,274	70,244	22,521	92,765	1,279,990	13.80	27.40	31.75
1974–5	2,054	477	2,531	4,252	5,290	4,440	87,165	25,221	112,386	1,261,359	11.20	19.90	22.05
1975–6	2,277	525	2,818	4,284	5,800	4,558	97,536	30,436	128,437	1,071,924	8.35	17.35	18.35
1976–7	2,081	399	2,480	4,490	5,520	4,663	93,445	22,203	115,648	811,358	7.02	14.10	14.95
1977–8	1,941	308	2,249	4,189	5,810	4,412	81,310	17,913	99,223	941,248	9.49	20.75	21.70
1978–9	2,480	490	2,970	4,358	5,220	4,484	107,592	25,578	133,170	1,087,000	8.16	16.20	18.30
1979–0	2,347	522	2,869		6,520	4,599	97,905	34,042	131,947	1,383,993	10.50	20.05	22.05
1980–1	2,747	565	3,312		6,440	4,413	109,764	36,386	146,150	1,873,007	12.80	25.30	25.55
1981–2	3,199	593	3,792		6,900	4,819	141,818	40,924	182,742	1,654,413	9.05	19.40	21.15
1982–3[1]	2,727	535	3,262		6,700	4,708	117,740	35,848	153,588	1,245,599	8.11	16.80	18.70
1983–4[1]	1,891	328	2,169		7,040	4,598	76,631	23,089	99,720	811,721	8.14		

[1] Preliminary. [2] F.O.B. mills, Houston, Texas (medium grain). From 1979–80 prices are at southwest Louisiana. [3] Houston, Texas (long grain). *Source: Economic Research Service, U.S.D.A.* T.550



Average Wholesale Price of Rice[1] No. 2 (Medium Grain)[2] Southwest Louisiana Dollars per cwt Bagged

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1971–2	8.70	8.70	8.70	8.70	8.90	8.90	8.90	8.90	8.90	9.10	9.10	9.10	8.88
1972–3	9.10	10.00	10.50	12.50	12.50	12.90	12.90	12.90	15.30	15.30	15.30	15.30	12.88
1973–4	16.30	18.50	21.30	29.50	30.00	30.00	30.00	30.00	30.00	30.00	25.00	25.00	26.30
1974–5	23.0	20.0	18.5	20.0	20.8	20.5	21.0	20.5	20.5	18.5	19.5	19.5	20.19
1975–6	19.5	16.8	16.8	17.0	17.8	15.5	15.5	13.5	13.0	15.5	15.5	15.5	16.0
1976–7	13.5	12.5	13.0	12.3	12.3	11.3	11.8	12.1	13.3	15.6	15.5	15.3	13.2
1977–8	14.5	15.0	15.4	20.5	21.5	21.5	—	21.5	20.5	19.0	—	18.5	18.8
1978–9	17.5	14.5	14.5	14.5	14.8	14.0	14.0	14.0	16.5	16.5	16.5	16.5	15.3
1979–0	19.0	20.0	20.5	20.5	19.5	20.0	22.0	23.5	24.0	24.0	22.0	21.0	21.3
1980–1	20.5	20.8	21.6	24.4	26.4	27.0	27.1	27.5	27.6	28.0	28.0	27.8	25.6
1981–2	26.4	24.2	22.9	21.2	20.0	18.8	17.8	16.1	16.0	16.4	16.2	16.0	19.3
1982–3[3]	16.5	16.5	16.5	16.7	17.8	17.3	16.5	16.5	16.5	17.1	17.5	17.5	16.9
1983–4[3]	17.5	17.5	17.5	17.5	17.5	17.5							
1984–5													

[1] Prior to May 1972 price is for MILLED NATO at New Orleans. [2] U.S. No. 2—Broken not to exceed 4%. [3] Preliminary. *Source: Bureau of Labor Statistics* (0213–0101)
T.549

U.S. Rice (Rough) Production by Type and Variety In Thousand Cwt.

Year	Long Grain	Medium Grain	Short Grain	Total	Year	Long Grain	Medium Grain	Short Grain	Total
1972	42,760	34,184	8,495	85,439	1978	84,792	36,454	11,924	133,170
1973	43,807	39,347	9,611	92,765	1979	80,692	40,421	10,834	131,947
1974	59,934	41,387	11,065	112,386	1980	86,851	51,407	7,892	146,150
1975	63,593	52,255	12,589	128,437	1981	110,426	61,497	10,819	182,742
1976	70,051	36,792	8,805	115,648	1982	93,375	51,342	8,871	153,588
1977	62,206	26,272	10,745	99,223	1983[1]	65,032	26,577	8,111	99,720

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.548

U.S. Exports of Milled Rice[1] by Country of Destination In Thousands of Metric Tons

Crop Year	Belg.-Lux.	South Africa	Canada	Un. Kingd.	South Korea	Nigeria	Indonesia	Italy	Bangladesh	Liberia	Saudi Arabia	Switzerland	Iraq	Iran	Total All Exports
1972–3		83	65		471		173	—	4	29	57	12	—	34	1,788
1973–4		86	81		121		60	—	—	28	94	14	9	42	1,608
1974–5		64	60	30	530	3	42	—	250	23	79	12	110	462	2,231
1975–6		82	71	30	129	12	—	46	245	24	117	14	81	174	1,538
1976–7		96	74	32	75	131	409	36	21	51	72	47	37	457	2,105
1977–8	19.2	71.4	73.9	12.3	—	172.0	467.3	163.2	83.6	41.3	169.7	29.4	89.9	343.7	2,270
1978–9	41.8	103.7	77.2	48.7	38.5	183.6	270.4	136.4	3.0	40.6	234.5	51.1	148.2	348.1	2,431
1979–0	85.0	105.5	77.6	30.1	574.7	137.9	225.1	42.5	—	61.9	169.5	63.3	309.6	31.1	2,706
1980–1	101.6	112.4	93.3	19.3	1,048.8	283.2	138.8	11.5	—	85.1	257.0	69.5	71.4	—	3,028
1981–2[2]	118.4	114.1	101.0	30.5	281.6	412.8	15.8	201.4	22.6	88.4	277.7	91.1	221.1	147.2	2,682
1982–3[2]		109.3	100.6		187.8	168.7	63.4		67.3	91.3	279.1		279.2	—	2,219
1983–4															

[1] No adjustment of brown & parboiled rice has been made; treated as milled rice. [2] Preliminary. *Source: Bureau of the Census, Dept. of Commerce* T.553

Exports of Rice From the United States In Millions of Pounds[1] (Clean Basis)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1972–3	360.4	241.7	313.3	443.6	407.0	339.8	300.1	478.4	423.5	271.4	159.1	204.3	3,943
1973–4	131.9	215.5	252.8	401.5	405.3	368.5	264.8	286.7	403.7	233.3	311.8	305.5	3,581
1974–5	174.4	329.0	349.8	331.9	442.0	544.9	564.4	556.2	463.9	437.0	555.4	247.7	4,996
1975–6	225.6	164.0	385.8	249.3	396.6	340.1	275.4	298.7	264.4	383.7	348.5	724.9	3,977
1976–7	396.5	319.6	308.2	405.8	574.0	233.2	312.9	487.3	262.7	529.2	380.5	497.8	4,709
1977–8	494.3	511.4	187.6	633.8	464.1	204.2	427.2	293.6	338.7	364.5	693.6	346.5	4,960
1978–9	325	545	467	371	596	361	416	484	498	531	334	434	5,362
1979–0	310	316	426	320	546	584	557	584	518	585	540	644	5,930
1980–1	419	577	409	474	730	533	613	809	688	794	497	371	6,914
1981–2	453	470	532	583	458	479	515	399	487	661	538	370	5,945
1982–3	809	320	431	199	307	241	316	490	446	438	550	360	4,907
1983–4	488	624	460	378	359								

[1] 162 pounds rough—100 pounds clean. *Source: Department of Commerce* T.554

Avg. Price Received by Farmers for Rice (Rough) in the U.S. In Dollars Per 100 Pounds (Cwt.)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[1]
1972–3	5.34	6.37	7.05	7.42	7.64	7.84	8.14	8.26	8.51	8.56	8.74	10.80	6.73
1973–4	10.90	13.30	14.80	16.70	15.50	15.80	16.90	17.20	15.90	17.20	17.50	11.90	13.80
1974–5	10.20	10.90	11.30	11.60	10.90	10.80	11.30	11.10	11.00	11.10	11.20	10.00	11.20
1975–6	9.83	9.19	8.87	8.59	8.51	7.95	7.54	6.17	7.15	7.06	6.82	7.45	8.35
1976–7	6.65	6.56	6.48	6.46	6.57	6.79	6.87	6.81	6.95	7.30	7.24	6.87	7.02
1977–8	8.02	8.12	9.13	10.20	11.00	10.70	10.70	10.70	10.80	10.10	9.58	9.49	9.49
1978–9	8.44	7.56	7.62	7.76	7.98	8.07	7.87	8.18	8.52	8.74	8.73	9.10	8.16
1979–0	10.00	9.81	10.30	9.83	8.41	9.88	11.00	11.70	11.60	11.30	10.20	10.80	10.50
1980–1	10.60	10.20	10.90	11.60	13.10	13.20	13.00	13.40	13.80	13.30	11.90	12.80	12.80
1981–2	11.80	10.70	10.20	9.86	9.34	9.34	9.46	9.46	8.54	8.55	8.54	8.25	9.05
1982–3	7.31	7.75	7.73	7.78	8.06	8.05	8.26	7.99	8.23	8.23	7.88	7.95	8.11
1983–4[2]	8.40	8.48	8.80	8.82	8.66	8.57	8.85	8.63	8.20				

[1] Weighted average by sales. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.555

Rubber

World natural rubber production in 1983, based on International Rubber Study Group (IRSG) data available in mid-April 1984, was some 4 percent larger than estimated 1982 production. Production in Malaysia, which accounts for around three-eighths of total world natural rubber production, increased by about one percent in 1983, to 1.53 million tonnes, and is expected to increase to 1.58 million tonnes in 1984, according to the Malaysian Primary Industries Ministry. Natural rubber production in Thailand was estimated at 576 thousand tonnes in 1983, according to that country's Board of Trade in early 1984, with 1984 production forecast at 596 thousand tonnes. Most of Thailand's output is reported to be RSS No. 3 and 4 grades preferred by Japanese tire makers. Exports of natural rubber by Thailand in 1983 totaled nearly 549 thousand tonnes, and exports in 1984 were expected to increase to 570 thousand tonnes.

Consumption of synthetic rubber worldwide in 1983 continued to exceed world production, according to International Rubber Study Group data available in mid-April, but by a smaller margin than in 1982. The International Institute of Synthetic Rubber Producers (IISRP) in April 1984 estimated world consumption of natural rubber in 1983 at 3.851 million tonnes, up from an estimated 3.706 million in 1982, and forecast a further increase in 1984 consumption, to 3.921 million tonnes. The IISRP estimated 1983 world consumption of synthetic rubber at 7.594 million tonnes versus 7.371 in 1982, and forecast 1984 consumption at 7.823 million tonnes. World demand for synthetic rubber is expected to grow by 3.3 percent a year over the next five years, according to the IISRP.

The improved demand for rubber in 1983 and prospects for further gains in 1984 reflect the sharp recovery in auto production in the U.S., Japan and elsewhere, primarily reflecting the economic recovery. Tire makers are said to account for more than 60 percent of total rubber use. In the U.S., tire shipments in 1984 were expected to increase by at least 5 to 6 percent over 1983 levels, with much of the gain to come from original equipment. Goodyear Tire and Rubber Company, the largest tire maker in the U.S., consuming an estimated 9 percent of the world's natural rubber production, was reported to be increasing its radial car tire capacity at its Lawton, Oklahoma plant by 20 percent. U.S. carmakers were expected to turn out around 7.3 million autos in 1984, up from 6.8 million in 1983.

World stocks of both natural and synthetic rubber were drawn down in 1983, which contributed to firmer rubber prices as auto sales and production increased in the U.S. and Japan, in particular. Imports by China and some other centrally-planned countries, as well as a large buying order for Japanese tires by Iran, also favored rising rubber prices.

Natural rubber prices in 1983 rose to an area within which the International Natural Rubber Organization (INRO) buffer stock manager, for the first time, could release rubber from the INRO stockpile. However, as of mid-April 1984 no sales were made. This stockpile totals an estimated 270,000 tonnes, in warehouses primarily in Europe and the U.S., and is said to consist mostly of TSR10 and 20 grades with the remainder RSS-1, 2 and 3 grades.

The INRO 5-day moving average price moved up to the 239 to 249 Malaysia/Singapore cents per kilo *may sell* area during 1983.

While there has been concern among natural rubber producers about prospective INRO stockpile sales, in the U.S. the GSA started buying rubber for the National Defense stockpile in 1983 to build its stockpile to a goal of 850 thousand tonnes from its inventory of 120 thousand. Purchases were expected to comprise RSS-1, 2 and 3 grades.

Futures Market

Rubber futures are traded on the London Commodity Exchange.

World Rubber Production[1] In Thousands of Metric Tons

	Natural										Synthetic						
Year	Sri Lanka	India	Indonesia	Malaysia	Philippines	Thailand	Liberia	Brazil	China	World Total	Canada	W. Germany	Japan	United States	United Kingdom	USSR	World Total
1978	155.7	133.0	902.5	1,582	56.6	467.0	72.5	23.7	75.0	3,745	248.3	407.0	1,029	2,662	293.7	1,950	8,905
1979	152.7	147.2	905.0	1,570	63.3	531.2	75.0	25.0	97.5	3,860	282.5	418.5	1,107	2,720	277.7	2,025	9,330
1980	133.2	155.4	1,020	1,530	69.0	501.1	77.5	27.8	113.0	3,845	252.8	389.9	1,094	2,215	211.8	2,040	8,645
1981	123.9	150.7	867.5	1,510	70.0	504.0	77.5	30.3	128.0	3,690	263.3	396.8	1,010	2,234	224.8	2,000	8,490
1982[2]	125.2	165.9	880.0	1,517	70.0	552.2	67.5	32.8	140.0	3,755	181.7	383.9	930.7	1,825	253.7	1,950	7,830
1983[3]	134.0	166	990	1,510	74	585	74	35	150	3,885	186	405	988	1,926	268	1,963	8,020

[1] Including rubber in the form of latex. [2] Preliminary. [3] Estimate. *Source: Rubber Study Group* T.556

World Consumption of Natural and Synthetic Rubber In Thousands of Metric Tons

	Natural									Synthetic						
Year	Australia	Brazil	Canada	France	W. Germany	Japan	Un. Kingdom	United States	World Total	Canada	France	W. Germany	Japan	Un. Kingdom	United States	World Total
1978	41.1	72.5	89.1	163.2	184.9	355.0	139.2	770.8	3,725	203.9	296.2	429.5	741.0	313.4	2,519	8,905
1979	45.4	75.9	93.8	177.0	184.5	390.0	137.5	740.4	3,870	232.0	317.8	447.1	830.0	301.1	2,501	9,330
1980	42.2	81.1	80.0	187.7	179.7	427.0	130.8	585.0	3,760	200.0	341.9	421.3	885.0	248.2	1,980	8,645
1981	41.9	74.4	82.0	167.2	169.1	436.0	120.0	635.0	3,700	210.0	303.4	396.2	851.0	245.0	2,022	8,490
1982[1]	36.4	67.8	76.0	156.9	171.2	439.0	118.0	585.0	3,655	182.0	265.2	386.9	797.0	240.0	1,765	7,830
1983[2]	29	68	85	157	173	497	119	655	3,880	197	264	391	851	244	1,860	8,020

[1] Preliminary. [2] Estimate. *Source: Rubber Study Group* T.557

World Stocks[1] of Natural Rubber, January 1 In Thousands of Metric Tons

	In Producing Countries								In Consuming Countries (Commercial Stocks)									
Year	Brazil	Viet-nam	Sri Lanka	Indo-nesia	Malaysia (Penin-sular)	Singa-pore	Thai-land	Total	Aus-tralia	Cana-da	Chi-na	France	W. Ger-many	India	Japan	United King-dom	United States	Total
1971	8.4	5.4	34.6	75.0	152.5	57.3	25.0	380.0	4.9	5.2	112.5	29.6	17.5	41.6	63.4	25.9	104.2	760.0
1972	11.6	1.9	33.1	75.0	163.9	55.1	27.5	385.0	4.4	6.6	72.5	26.5	15.7	47.5	84.3	29.8	135.5	765.0
1973	8.6	2.7	29.0	75.0	195.6	52.1	27.5	415.0	3.5	6.8	60.0	27.7	11.8	56.0	64.3	27.4	118.6	695.0
1974	9.7	2.9	46.5	75.0	188.6	68.6	32.5	450.0	5.3	6.8	122.5	28.9	11.1	54.5	95.1	28.5	106.0	765.0
1975	12.9	11.5	44.7	75.0	201.1	43.4	32.5	435.0	5.7	8.5	115.0	33.4	12.7	47.8	90.8	23.0	117.9	800.0
1976	12.0	6.3	26.0	75.0	230.5	59.2	37.5	475.0	4.0	6.8	155.0	23.8	12.5	54.0	104.6	24.2	116.0	785.0
1977	11.3	4.0	33.9	75.0	239.1	38.7	56.9	495.0	4.7	8.2	125.0	24.1	12.1	60.2	94.8	31.2	138.5	805.0
1978	13.6	4.0	38.8	75.0	214.8	33.7	60.8	470.0	5.0	11.7	137.5	23.0	12.4	57.4	79.3	28.7	143.4	775.0
1979	19.1	4.0	47.4	75.0	245.5	35.8	60.3	505.0	2.7	8.3	137.5	20.1	13.7	42.9	90.7	29.0	142.3	730.0
1980	20.8	4.0	61.3	75.0	240.1	51.1	44.7	515.0	3.8	7.3	135.0	20.3	13.5	54.6	76.5	27.6	144.6	740.0
1981	20.8	4.0	58.5	75.0	250.4	46.3	61.0	530.0	3.2	6.0	150.0	19.6	13.5	40.1	106.9	21.4	126.7	785.0
1982	19.6	4.0	33.7	75.0	281.3	43.8	60.0	530.0	2.7	9.9	140.0	16.8	14.5	45.9	116.9	20.0	131.9	840.0
1983[2]	18.5	4	11.3	75.0	258.8	26.9	36.6	590.0	4.2	6.9	140.0	9.5	13.5	60.6	90.8	20	95.4	880.0
1984[3]	12	6	12	75	250	30	35	555	3	6	145	8		41	76		76	830
1985																		

[1] Exclusive of "Stock Afloat" and unreported gov't. stockpiles. [2] Preliminary. [3] Estimate. *Source: Rubber Study Group* (London) T.558

Net Exports of Natural Rubber from Producing Areas In Thousands of Metric Tons

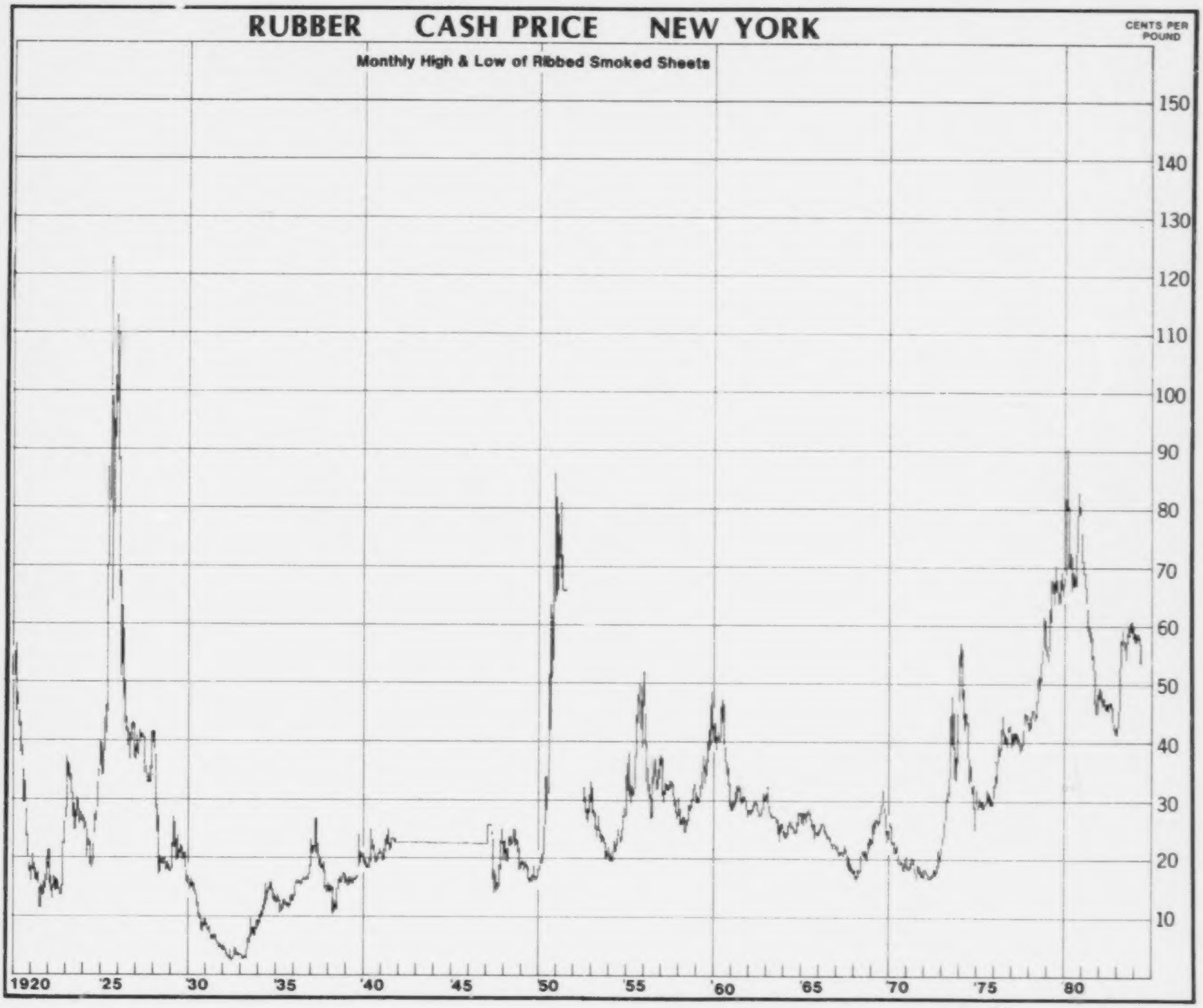
Year	Burma	Cam-bodia	Sri Lanka (Ceylon)	Indo-nesia	Malaysia (Penin-sular)	Sabah	Sara-wak	Thai-land	Viet-nam	Zaire	Liber-ia	Niger-ia	Other Africa	Papua New Guinea	World Total
1971	11.9	.5	137.8	757.8	1,308	28.6	19.5	307.3	31.1	40.0	74.2	50.2	67.0	6.0	2,835
1972	10.0	9.3	138.3	733.9	1,285	26.3	19.9	324.4	21.8	40.0	83.3	41.2	66.8	5.9	2,810
1973	10.0	19.2	131.1	841.5	1,514	35.3	41.8	368.2	20.5	40.0	85.5	49.4	72.3	5.9	3,180
1974	10.0	26.4	127.6	794.7	1,467	31.6	32.6	365.2	23.0	26.6	86.2	60.0	59.3	5.6	3,110
1975	10.0	10.0	160.9	788.3	1,363	32.0	29.0	334.7	7.5	25.0	82.8	52.7	56.5	5.5	2,920
1976		21.0	136.9	811.5	1,504	35.8	40.3	373.0	34.0		80.7	32.5	60.0	4.6	3,165
1977		14.0	134.5	800.2	1,530	38.8	37.6	404.0	33.0		69.7	35.4	60.0	4.2	3,210
1978		16.0	138.0	863.2	1,489	36.8	39.6	441.8	35.0		71.8	29.4	57.3	4.1	3,250
1979		9.5	128.2	861.0	1,537	33.2	39.5	517.8	40.0		75.0	26.4	51.5	4.0	3,325
1980		—	120.9	976.1	1,416	30.9	35.2	456.8	35.0		76.5	14.6	60.8	4.0	3,265
1981		1.0	132.5	808.7	1,402	24.5	28.2	476.0	24.0		76.9	23.6	57.8	4.5	3,100
1982[1]		1.0	131.3	801.4	1,317	21.7	15.9	546.6	24.0		67.5	26.8	54.0	2.3	3,060
1983[2]		2	125	875	1,400	23	17	540	26		70	28.6	56	4	3,000
1984															

[1] Preliminary. [2] Estimate. *Source: Rubber Study Group* (London) T.559

U.S. Imports of Natural Rubber (Includes Latex & Guayule) In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1970	59.0	44.1	56.8	45.7	42.1	41.6	37.8	33.7	46.6	46.7	46.9	48.9	549.9
1971	45.2	44.7	41.1	42.8	49.8	74.5	47.6	69.6	54.3	44.7	42.1	56.4	612.7
1972	57.9	51.7	64.0	47.6	49.8	36.4	38.7	50.7	39.3	54.7	55.3	56.0	602.2
1973	57.7	48.1	59.4	43.3	55.5	53.4	40.7	66.3	63.7	60.2	56.3	38.3	642.9
1974	53.2	59.1	63.4	50.2	65.3	53.2	73.5	55.0	68.3	35.1	45.2	59.8	681.3
1975	68.2	41.3	51.5	52.3	32.7	58.4	52.7	59.7	54.3	57.1	66.2	62.2	656.6
1976	66.1	55.6	72.1	69.4	46.8	65.7	58.4	40.3	67.5	50.0	52.3	68.8	712.9
1977	70.2	55.6	82.3	72.2	50.0	71.2	72.9	49.3	76.3	73.2	37.4	82.0	792.4
1978	46.7	45.7	71.8	83.4	76.0	54.4	47.8	71.0	77.1	54.9	46.1	71.5	746.2
1979	72.8	64.2	72.8	89.9	55.0	82.0	56.2	58.3	58.9	46.1	43.6	47.9	747.7
1980	76.8	56.0	74.0	38.9	55.3	44.5	38.5	31.4	55.9	31.8	50.3	45.1	598.3
1981	30.06	86.64	53.38	67.62	66.36	50.47	41.59	43.40	62.76	69.42	56.23	49.13	662.4
1982	50.99	59.33	45.71	53.86	56.19	63.39	38.67	54.35	40.60	54.36	51.37	49.45	618.3
1983[2]	33.01	49.63	48.54	62.11	63.44	65.20	50.41	31.90	44.22	67.83	71.06	54.71	642.1
1984[2]	87.84												

[1] Includes latex and guayule. [2] Preliminary. *Source: Department of Commerce* T.560



Average Spot Crude Rubber Prices (Smoked Sheets[1]) in New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	18.4	18.0	18.3	19.4	20.0	17.8	16.6	18.0	17.9	17.6	17.3	17.1	18.0
1972	18.0	17.8	17.0	16.5	16.9	17.3	17.5	17.5	18.0	19.4	20.5	21.0	18.1
1973	22.8	25.5	28.6	30.8	31.0	36.8	41.3	41.3	36.4	33.6	39.5	54.0	35.1
1974	53.8	53.8	48.8	42.8	43.8	42.0	34.3	34.8	32.0	32.0	27.5	31.5	39.8
1975	29.0	29.5	29.3	29.3	28.5	29.3	31.8	30.3	30.8	30.0	30.0	30.8	29.9
1976	33.0	35.8	37.0	38.8	40.5	44.0	40.1	40.5	39.6	42.0	43.0	40.0	39.5
1977	40.8	40.8	41.6	40.6	40.8	39.6	39.1	39.9	44.8	44.3	43.8	42.9	41.6
1978	43.0	44.6	45.5	43.9	45.0	49.0	49.4	52.0	54.4	54.3	58.1	55.8	49.6
1979	54.4	57.0	61.5	67.4	75.4	68.8	63.8	65.5	64.0	68.5	67.0	67.9	65.1
1980	73.0	86.5	73.3	72.3	69.0	68.5	67.3	68.0	72.8	79.0	—	73.0	73.0
1981	71.3	69.0	65.0	59.0	58.0	57.0	56.0	54.0	50.4	—	45.6	48.3	57.6
1982	48.8	46.5	47.0	45.3	45.3	46.1	46.5	46.8	44.5	42.6	42.1	41.8	45.3
1983	44.0	48.5	57.8	57.8	56.8	54.5	58.3	59.3	60.5	60.5	58.3	—	56.0
1984	57.3	58.3											
1985													

[1] No. 1, ribbed, plantation rubber. *Source: Bureau of Labor Statistics* (07-11-02.01) T.561

Consumption of Natural Rubber in the United States In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	46.2	48.3	54.4	49.7	49.7	52.2	43.5	50.9	53.6	54.1	49.8	50.0	577.8
1972	55.3	52.7	59.1	51.9	56.1	53.2	40.9	55.3	54.1	58.5	52.6	52.9	640.6
1973	58.1	56.8	63.2	59.4	57.3	54.5	49.0	56.4	56.3	63.4	57.1	54.0	685.44
1974[1]	65.5	59.4	64.0	59.7	60.8	60.3	51.4	59.9	60.3	69.7	58.2	50.0	719.04
1975	61.2	53.9	52.9	56.3	58.5	58.4	49.4	54.8	61.3	62.0	47.9	53.4	669.97
1976	71.6	59.6	71.7	66.7	44.2	67.5	50.5	42.0	76.2	64.5	56.9	59.4	730.73
1977	70.2	66.8	74.5	68.5	66.8	68.2	50.4	62.8	64.6	63.6	61.3	62.5	780.13
1978	59.2	61.1	63.8	61.2	68.0	61.9	51.7	69.1	65.6	69.5	70.9	62.8	764.65
1979	68.3	66.6	74.5	61.8	60.2	59.0	57.9	63.2	57.7	65.2	55.6	47.9	739.00
1980	63.0	57.3	55.7	46.9	42.3	41.3	38.8	43.2	49.4	49.5	50.3	48.7	586.15
1981	49.0	52.6	55.4	55.1	53.9	59.5	56.4	51.1	52.1	57.3	49.7	42.6	634.67
1982	55.3	59.9	50.2	57.8	63.3	68.9	32.7	65.6	48.8	53.3	48.9	56.0	660.61
1983[2]	64.5	44.5	55.3	55.3	56.9	67.0	48.8	39.2	50.2	75.3	69.7	49.6	676.27
1984													

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Rubber Manufacturers' Association* T.562

Stocks of Natural Rubber in the United States, Beginning of Month In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	102.6	91.4	92.9	102.7	98.6	105.9	104.9	122.0	125.6	131.4	124.9	126.4
1972	133.3	128.0	128.0	133.2	129.7	117.0	109.1	102.9	112.3	109.5	109.6	112.3
1973	116.7	122.8	116.8	120.5	117.5	122.2	115.9	113.7	117.2	128.7	122.4	122.5
1974[1]	122.4	124.0	120.1	129.5	130.3	131.0	132.6	155.4	155.2	143.0	129.9	124.5
1975	137.5	125.6	126.9	126.9	125.4	113.1	125.2	118.7	116.8	107.0	104.9	110.7
1976	105.4	99.8	158.2	127.0	140.9	104.7	102.3	106.8	92.6	104.9	64.5	71.9
1977	125.3	119.9	127.0	123.8	118.4	120.5	119.7	131.7	139.7	133.0	137.5	129.4
1978	127.6	123.3	116.4	117.1	115.6	122.8	123.4	125.4	126.1	127.7	133.5	124.0
1979	125.6	121.4	115.6	116.1	136.6	130.2	137.7	146.0	144.4	135.6	135.0	124.5
1980	132.1	131.4	135.3	141.4	152.4	145.7	147.4	149.9	138.5	132.9	129.5	123.1
1981	126.7	128.0	125.4	122.8	127.6	124.1	119.5	113.5	111.2	114.4	123.0	130.5
1982	142.4	127.1	126.5	121.3	116.6	110.8	105.4	110.2	97.7	89.0	90.2	95.4
1983[2]	95.4	91.8	95.0	87.4	93.8	100.0	97.9	99.2	90.7	83.3	74.8	75.9
1984[2]	80.8											

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Rubber Manufacturers' Association* T.563

Stocks of Synthetic Rubber in the United States, Beginning of Month In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	514.8	526.3	517.1	497.6	491.2	501.8	487.8	505.3	483.9	468.3	462.1	480.3
1972	488.2	487.4	478.7	480.1	492.7	491.3	485.1	519.2	512.6	515.5	504.4	495.7
1973	495.7	471.9	473.1	454.8	461.6	469.4	469.9	499.3	501.6	511.2	500.9	494.7
1974[1]	521.0	508.9	507.4	489.4	478.1	503.1	505.6	567.6	583.5	569.1	560.3	585.7
1975	618.7	596.0	590.2	479.3	426.6	424.7	408.2	390.8	378.9	368.0	358.9	365.3
1976	369.9	405.1	406.4	386.7	416.4	453.9	472.7	499.1	513.6	475.5	464.7	449.0
1977	458.1	441.4	431.8	407.6	412.9	409.3	402.2	430.4	430.3	422.3	424.5	424.0
1978	426.8	441.0	427.9	434.5	446.9	441.4	433.1	456.5	445.1	435.8	425.3	419.9
1979	424.1	407.1	400.0	393.6	398.9	391.5	401.3	411.3	402.2	402.8	389.9	402.1
1980	402.9	439.9	436.2	427.6	452.2	445.1	429.2	391.2	372.3	339.7	325.4	328.9
1981	341.8	364.5	354.6	347.0	365.9	368.3	359.8	369.4	353.4	351.9	352.6	364.4
1982	349.0	333.3	336.8	349.2	358.3	364.4	352.9	342.8	326.6	304.3	318.8	294.6
1983[2]	255.9	281.0	284.8	283.5	283.8	294.3	290.8	304.8	276.2	262.3	256.1	282.7
1984[2]	283.8											

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Department of Commerce* T 564

RUBBER

Production of Synthetic Rubber in the United States In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	183.6	166.5	181.8	184.1	196.5	182.1	187.5	187.0	187.0	193.8	194.9	196.1	2,241
1972	200.0	193.0	210.1	208.7	210.7	191.0	195.5	202.7	200.4	211.6	201.7	199.1	2,417
1973	216.1	208.0	216.6	223.1	221.2	199.9	210.0	220.4	210.7	227.5	212.6	219.4	2,585
1974[1]	226.1	212.0	229.5	224.1	225.7	212.5	206.0	211.3	208.2	205.1	185.9	154.8	2,498
1975	155.9	136.7	137.1	138.7	153.6	149.8	144.9	172.7	182.0	194.3	185.7	189.2	1,938
1976	191.5	193.1	210.5	204.2	191.4	176.3	156.7	160.7	192.7	209.5	206.3	210.9	2,304
1977	204.0	193.0	213.1	204.8	211.5	201.8	191.3	198.8	201.7	205.6	195.4	196.6	2,418
1978	198.2	193.8	210.3	214.9	211.2	194.4	195.9	205.7	207.4	212.3	212.1	219.1	2,475
1979	207.9	200.8	232.1	216.7	223.3	210.7	202.9	202.8	210.0	213.8	206.0	207.6	2,535
1980	195.6	194.7	206.8	192.4	159.6	129.6	110.3	123.7	149.8	174.6	178.5	193.7	2,015
1981	193.5	169.7	200.4	180.9	175.9	158.2	161.5	159.7	168.4	170.0	157.7	125.5	2,021
1982	155.6	162.3	187.9	171.7	171.1	156.8	139.7	145.5	147.9	154.4	122.4	116.5	1,829
1983[2]	155.2	153.9	170.1	160.5	171.1	164.5	154.6	150.5	163.2	178.0	193.7	163.1	1,978
1984													

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Department of Commerce* T.565

Consumption of Synthetic Rubber in the United States In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	163.7	163.5	187.8	174.0	174.2	184.5	152.1	176.7	186.1	190.3	173.3	178.7	2,093
1972	182.2	186.8	201.4	189.7	197.0	197.7	152.1	191.9	195.3	210.2	194.0	193.5	2,292
1973	206.5	199.8	220.6	199.0	197.7	196.1	180.3	197.8	197.4	219.7	196.9	189.0	2,401
1974[1]	222.6	203.5	220.0	208.1	204.1	199.4	177.4	204.0	198.6	213.6	174.5	148.8	2,356
1975	178.4	162.4	143.3	167.5	165.7	170.1	154.3	171.5	183.2	201.2	157.7	167.0	2,022
1976	183.8	195.0	221.9	169.6	151.5	146.7	118.2	142.5	220.2	213.3	211.9	200.6	2,175
1977	217.6	203.6	232.6	203.1	218.8	208.6	161.1	209.8	209.0	205.7	190.9	203.4	2,464
1978	193.7	193.2	206.2	197.5	212.7	194.7	170.6	213.9	211.7	220.3	212.1	209.8	2,436
1979	226.0	201.4	224.4	201.5	212.0	179.6	176.5	202.3	187.9	202.8	174.5	163.3	2,341
1980	170.8	176.1	191.1	148.9	135.7	120.1	131.0	133.7	166.0	167.9	157.7	155.1	1,854
1981	153.0	166.7	194.0	144.9	167.1	154.1	144.7	165.0	163.5	163.8	141.1	131.9	1,890
1982	153.3	140.7	154.3	145.3	148.5	154.5	135.8	150.5	158.1	131.0	136.8	136.1	1,757
1983[2]	131.7	140.2	158.2	146.3	146.2	156.7	135.9	174.5	174.4	184.5	162.1	150.0	1,861
1984													

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Department of Commerce* T.566

Exports of Synthetic Rubber from the United States In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	19.8	23.3	27.3	24.4	25.9	20.8	24.4	29.4	35.0	14.2	9.8	15.5	269.8
1972	26.8	26.7	20.0	16.8	20.0	18.1	20.1	22.1	16.5	24.0	21.9	24.0	257.1
1973	23.65	22.21	22.99	22.37	24.18	23.58	20.86	18.97	29.34	25.01	21.60	21.10	275.84
1974	22.41	20.55	27.76	27.50	26.01	21.06	21.08	25.78	21.05	18.00	19.13	16.80	267.12
1975	14.52	17.05	15.06	17.17	15.69	16.78	16.24	18.36	19.28	20.64	21.15	22.57	214.50
1976	21.24	22.55	25.15	21.38	22.55	22.48	24.75	22.70	20.59	21.59	19.86	21.13	267.99
1977	19.11	20.97	24.34	21.48	22.06	20.78	24.72	14.86	26.15	14.59	13.80	17.13	239.98
1978	16.94	18.86	22.55	19.48	24.90	22.28	19.35	20.04	20.77	22.22	23.81	23.77	254.96
1979	23.62	22.29	27.74	29.43	28.74	34.61	34.51	39.37	34.90	38.61	36.53	34.76	385.11
1980	31.46	34.48	41.98	41.68	46.88	37.33	36.54	30.46	25.51	33.45	30.72	32.31	422.78
1981	31.21	31.65	38.73	31.77	32.00	28.55	26.27	21.97	24.40	23.94	22.49	21.65	334.63
1982	27.76	23.46	31.18	26.53	24.73	25.23	20.40	22.04	22.83	21.13	20.47	18.86	284.62
1983	20.24	18.61	24.44	24.91	31.66	24.37	20.15	21.08	22.01	20.14	23.75	23.67	275.01
1984	24.12												

Source: Department of Commerce T.567

Production of Auto. Pneumatic Casings[2] & Motor Vehicle Registrations in the U.S. In Ths. of Casings

Year	Total Production of Tires													Regis.[1]
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	(Dec. 31)
1971	16,790	17,678	19,693	17,987	18,036	18,911	15,954	17,640	19,204	19,454	17,447	17,584	216,361	113.0
1972	19,064	19,132	20,584	19,005	19,725	20,270	14,765	18,608	19,352	20,999	18,721	19,387	229,611	118.8
1973	21,001	19,993	22,229	19,193	18,693	17,752	14,287	17,325	17,727	19,841	18,035	17,343	223,418	125.7
1974	20,366	19,349	20,497	18,334	18,379	17,830	14,484	17,454	17,426	19,737	15,245	12,294	211,390	130.0
1975	14,753	13,184	12,107	15,222	15,677	16,678	14,531	16,413	17,878	18,821	15,212	16,215	186,705	133.0
1976	17,598	18,200	20,552	16,085	9,856	10,453	8,025	8,954	18,096	21,113	18,827	20,194	187,953	138.5
1977	20,638	20,094	22,640	20,087	19,512	20,734	15,050	19,495	19.321	18,926	17,716	17,425	231,638	143.8
1978	18,290	18,319	18,987	18,828	19,148	18,946	15,108	19,245	19,155	20,497	18,299	18,869	223,406	148.8
1979	20,352	19,592	21,807	18,609	18,544	15,603	14,904	16,911	15,985	17,775	14,480	12,340	206,687	154.1
1980	15,188	15,059	15,082	13,678	11,370	10,716	10,206	12,057	13,911	15,790	12,861	13,346	159,263	155.9
1981	15,434	15,614	16,805	15,438	15,157	15,447	14,321	15,443	15,894	16,604	13,750	11,855	181,762	159.5
1982[3]	14,866	15,387	17,051	15,077	14,856	15,669	12,293	14,835	15,528	15,381	13,585	13,972	178,500	160.4
1983[3]	15,497	14,992	15,370	16,325	15,653	15,473	12,570	16,440	16,360	16,734	15,136	15,483	186,923	
1984														

[1] Registrations, in millions, of all privately & publicly owned vehicles (except military). [2] Passenger cars, buses, trucks & motorcycle tires. [3] Preliminary. *Sources: Rubber Manufacturers' Association; Motor Vehicle Mfg. Association* T.568

Stocks of Auto. Pneumatic Casings & Passenger[1] Car Registrations in the U.S. In Ths. of Casings

Year	Total Production of Tires												Regis.[1]
	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	(Dec. 31)
1971	50,175	52,894	56,462	57,656	54,436	53,454	50,821	50,397	50,401	49,396	50,083	51,015	92.8
1972	54,982	59,380	62,689	63,234	60,896	59,753	58,836	57,836	56,895	54,965	55,769	56,319	97.1
1973	60,255	63,646	66,419	66,708	62,872	60,485	56,834	52,341	50,392	47,775	45,636	46,472	102.0
1974	50,275	53,308	57,056	60,553	59,020	58,995	56,322	53,469	53,260	51,645	50,851	53,321	104.9
1975	55,242	58,758	60,970	57,721	54,082	52,037	49,803	46,990	47,405	45,711	46,002	47,569	106.7
1976	50,020	53,172	55,395	54,837	49,125	40,259	32,405	25,581	21,285	24,594	27,581	30,200	110.2
1977	34,768	39,010	43,212	45,616	45,832	46,231	44,887	43,460	45,229	44,542	43,841	45,176	113.7
1978	47,181	51,523	54,621	51,986	50,006	49,277	46,293	44,280	44,057	41,796	40,135	40,394	116.6
1979	43,472	47,212	51,284	52,223	53,540	53,033	46,362	49,397	48,422	46,002	44,357	44,546	120.2
1980	44,873	46,760	49,993	50,471	49,220	46,972	42,817	40,079	37,057	33,730	32,112	32,363	121.7
1981	33,298	41,226	44,402	45,217	44,713	43,480	41,445	39,998	39,601	38,986	39,487	41,112	123.5
1982	40,863	42,904	46,254	47,817	46,583	45,337	43,475	40,763	40,192	38,685	38,116	38,436	125.0
1983[2]	39,955	43,839	45,483	50,287	51,921	42,395	39,622	36,989	35,541	32,854	31,530	31,676	
1984[2]	33,340												
1985													

[1] Registrations, in millions, of privately and publicly owned passenger cars (except military). [2] Preliminary. *Sources: Rubber Manufacturers' Association; Motor Vehicle Mfg. Association* T.569

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Rye

U.S. rye stocks at the beginning of the 1983/84 season on June 1, 1983 amounting to 6.4 million bushels were double the relatively low stocks on hand a year earlier. Rye production in 1983 amounted to 28.2 million bushels, up 34 percent from the 1982 crop, as growers harvested 923 thousand acres, up 28 percent from a year earlier, and as the national average yield reached a record-high 30.5 bushels per acre. As a result, total supply for the 1983/84 season amounted to about 35.1 million bushels, 30 percent above 1982/83 supply.

Domestic disappearance of rye in the 1983/84 season was estimated by the USDA in early 1984 at 25.4 million bushels, up from 20.4 million in the 1982/83 season. Residual use of rye, considered to approximate total feed use, was expected to increase to 15.0 million bushels from an estimated 10.6 million in the previous season. Food use was expected to increase to 3.5 million bushels, above the 3.3 million estimated for the previous season, but in line with most other recent seasons. Industrial use of rye was estimated to decline to 2.1 million bushels from 2.3 million in 1982/83, and seed use of 4.8 million was projected, up from 4.2 million in 1982/83.

Exports of rye in the 1983/84 season were projected by the USDA at 0.5 million bushels, up from the relatively low 0.2 million exported in 1982/83, but well below exports in other recent seasons.

Ending stocks of rye in the U.S. on May 31, 1984 were estimated by the USDA at 9.2 million bushels, up from 6.4 million a year earlier and the highest carryover since 1979/80. The USDA no longer reports quarterly stock figures for rye.

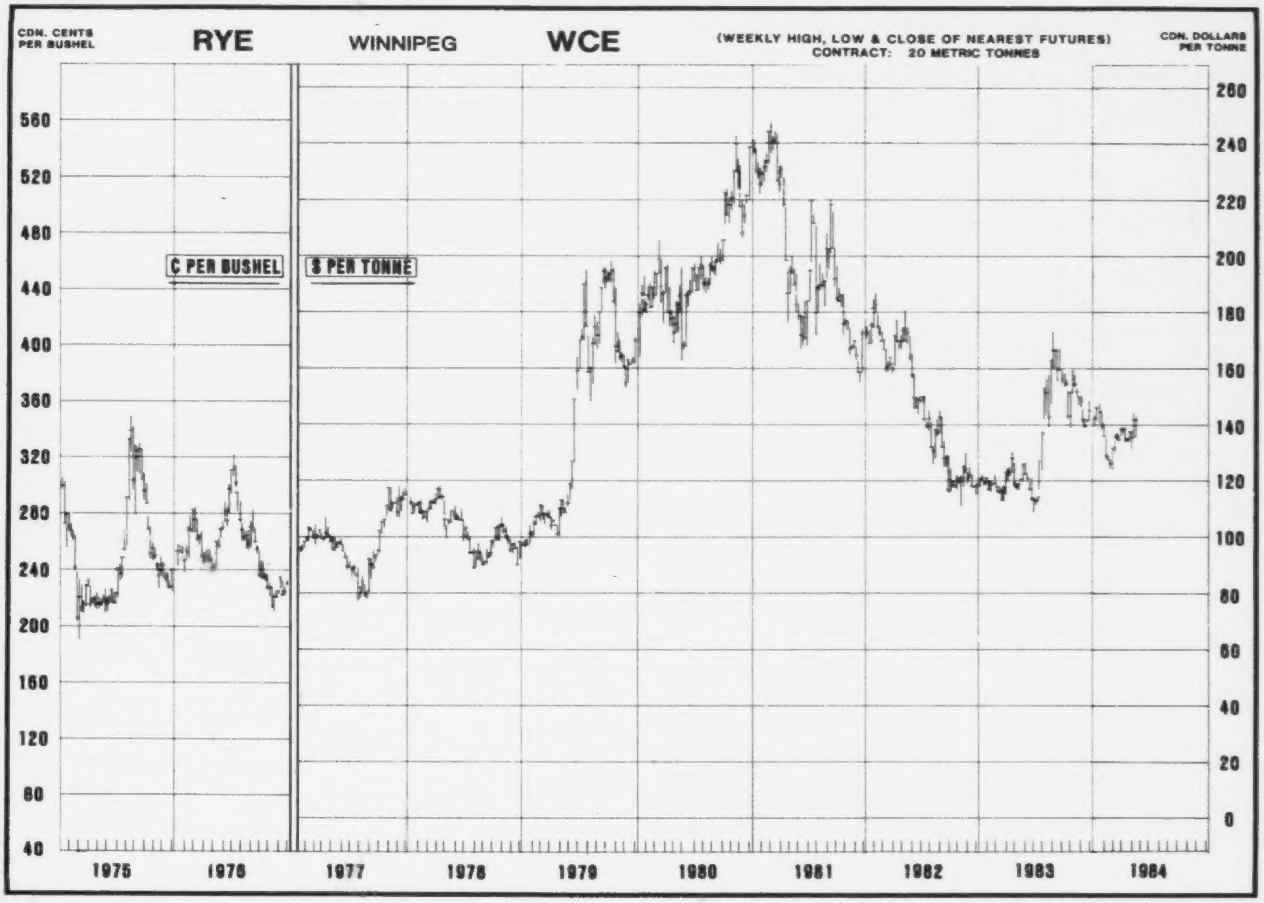
U.S. rye seeding in the fall of 1983 for harvest in 1984 increased 7.7 percent to nearly 3.0 million acres, according to the December 22, 1983 USDA report on 1984 crop winter wheat and rye seedings.

U.S. Government Price Support

The 1984 crop national average loan rate for rye is $2.17 per bushel, down from $2.25 for the 1983 crop. Rye is not included in the 1984 Feed Grain Program for target price level and disaster provision protection. Price support is available through March 31, 1985, with loans maturing no later than the last day of the ninth calendar month following the month in which the loan is made.

Futures Market

Rye futures are traded on the Winnipeg Commodity Exchange.



World Production of Rye In Thousands of Metric Tons

Crop Year	Argentina	Austria	Canada	Czechoslovakia	Denmark	France	Germany West	Germany East	Hungary	Netherlands	Poland	Spain	Turkey	USSR	United States	World Total
1971–2	256	448	557	619	150	308	3,188	1,754	182	209	7,827	269	900	10,600	1,252	29,605
1972–3	500	402	344	633	155	350	2,954	1,947	171	151	8,149	263	755	9,600	741	28,212
1973–4	613	400	363	688	140	327	2,693	1,699	175	105	8,268	252	690	10,759	660	28,859
1974–5	306	415	480	671	168	315	2,559	1,949	175	78	7,881	254	560	15,218	483	32,629
1975–6	273	347	523	530	163	292	2,126	1,563	147	63	6,270	241	750	9,064	457	23,702
1976–7	330	410	440	561	214	284	2,100	1,455	156	65	6,922	214	740	13,991	381	29,397
1977–8	170	351	392	540	320	375	2,546	1,500	142	74	6,257	205	690	8,471	462	23,440
1978–9	210	410	605	625	315	435	2,548	1,895	136	68	7,434	251	620	13,603	665	30,698
1979–0	202	278	525	486	257	355	2,189	1,830	92	49	5,201	221	620	8,100	569	21,727
1980–1	155	383	448	575	199	405	2,184	1,917	139	39	6,566	284	525	10,205	419	25,268
1981–2	149	320	927	544	208	342	1,793	1,797	115	29	6,731	212	520	9,500	478	24,375
1982–3[1]	244	348	888	600	226	330	1,703	2,117	120	26	7,812	170	500	14,000	532	30,289
1983–4[2]															715	

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

T.570

Salient Statistics of Rye in the United States

Year Begin. June 1	Supply						Disappearance							Acreage		Yield Per Harvested Acre Bushels
	Stocks, June 1						Domestic Use									
	Privately Owned[2]	Gov't.[3]	Total Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed[5]	Total	Exports	Total Disappearance	Planted	Harvested for Grain	
	Thousands of Bushels													Mil. Acres		
1971–2			29,331	49,223	241	78,795	5,195	3,005	5,262	16,276	29,738	2,177	31,915	4,842	1,751	28.1
1972–3			46,880	28,256	154	75,290	5,122	3,038	5,321	16,458	29,939	6,535	36,474	3,458	1,050	26.9
1973–4			38,816	24,677	1	63,494	6,250	2,547	4,967	8,042	21,806	27,513	49,319	3,380	955	25.8
1974–5	14,175	—	14,175	17,506	277	31,958	5,459	1,386	4,215	7,811	18,871	6,465	25,336	2,828	784	22.3
1975–6	6,622	—	6,622	15,924	944	23,524	4,172	2,060	4,217	7,554	18,003	1,117	19,120	2,829	728	21.9
1976–7	4,404	—	4,404	14,891	248	19,500	3,696	1,930	4,217	5,304	15,147	38	15,100	2,652	719	20.7
1977–8	4,418	—	4,418	16,543	127	21,100	3,648	1,875	4,806	7,000	17,100	24	17,100	2,652	677	24.4
1978–9	4,137	—	4,137	24,065	145	28,200	3,690	2,369	4,600	8,100	18,800	400	19,200	2,865	926	26.0
1979–0	8,973	—	8,973	22,389	7	31,369	3,523	2,116	4,034	7,082	16,755	2,422	19,177	2,921	869	25.8
1980–1	12,000	192	12,192	16,483	10	28,685	3,515	2,050	4,150	7,331	17,046	7,494	24,540	2,537	675	24.4
1981–2	4,000	145	4,145	18,822	432	23,399	3,458	2,242	4,160	8,915	18,775	1,529	20,304	2,623	706	26.7
1982–3[1]			3,095	20,954	3,043	26,955	3,315	2,256	4,240	10,538	20,349	194	20,543	2,621	721	29.1
1983–4[4]			6,312	28,152	500	35,100	3,500	2,100	4,800	15,000	25,400	500	25,900	2,765	923	30.5
1984–5																

[1] Preliminary. [2] Includes total loans. [3] Uncommitted, gov't only. [4] Forecast. [5] Residual; approximates total feed use. *Source: Economics Service, U.S.D.A.*

T.571

Production of Rye in the United States In Thousands of Bushels

Year	Illinois	Indiana	Kansas	Michigan	Minnesota	Georgia	Nebraska	No. Dakota	Ohio	Oklahoma	Oregon	So. Dakota	Virginia	Texas	Wisconsin	So. Carolina
1969	576	525	1,121	1,120	2,268	1,692	2,565	5,175	403	980	390	7,128	442	722	280	
1970	529	485	1,892	1,134	2,850	1,656	4,750	5,249	336	936	250	8,768	486	566	253	
1971	529	432	2,640	850	5,404	1,955	5,880	9,750	396	780	260	12,320	475	378	288	
1972	529	300	500	806	2,990	1,500	1,440	4,615	256	1,260	200	9,108	408	630	210	
1973	462	299	735	675	3,150	1,425	1,300	3,039	232	1,333	168	7,480	322	648	189	
1974	361	216	266	450	1,550	1,900	906	2,650	180	595	184	4,278	324	300	240	
1975	374	234	168	456	2,225	1,350	855	2,975	210	570	192	2,346	230	760	315	
1976	315	230	136	468	2,048	2,090	765	2,831	210	608	168	1,485	264	378	252	
1977	330	260	180	456	2,436	1,995	1,050	2,080	248	646	125	3,480	350	400	364	640
1978	368	175	315	600	2,352	2,530	760	5,400	186	570	168	6,200	425	406	357	836
1979	391	208	504	625	2,275	2,310	770	4,200	155	910	144	5,700	384	513	368	609
1980	368	182	210	504	1,900	1,995	666	1,470	231	816	150	4,030	325	494	368	616
1981	336	234	252	532	2,883	2,730	924	2,560	150	680	150	3,220	364	475	408	726
1982	299	260	240	638	3,300	1,470	1,269	3,400	155	874	145	4,680	364	504	248	621
1983[1]	336	270	220	660	4,960	1,470	1,265	5,100	210	780	125	8,740	312	450	300	320

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

T.572

U.S. Rye Crop Production Reports and CCC Operations In Thousands of Bushels

Year Begin. June 1	Official Crop Reports				National Average —Support Rate—		Placed Under Loan	Direct Purchases	Total	Delivered to CCC	Total Stocks Ending May 31			
													— Privately Owned[3] —	
	July 1	Aug. 1	Dec. 1	Final	$ Per Bushel	% of Parity					Ending Carryover[1]	CCC Uncommitted	Under Loan[4]	Other
1971-2	51,179	52,306	50,935	49,223	.89	57	18,958	1,238	20,196	11,500	46,880	28,073	12,715	6,092
1972-3	30,798	31,315	29,536	28,256	.89	56	6,695	195	6,890	1,500	38,816	—	8,788	30,028
1973-4	24,865	25,506	26,398	24,677	.89	51	443	2	445	—	14,175	—	80	14,095
1974-5	22,020	19,616	19,293	17,506	.89	46	196	—	196	—	6,622	—	30	6,592
1975-6	18,830	18,551	17,875	15,958	.89	39	87	—	87	—	4,403	—	47	4,468
1976-7	16,957	17,382	16,667	14,951	1.20	48		—	100	—	4,414		—	
1977-8	17,787	18,242	16,998	17,312	1.70	61		—	900	—	4,418		—	
1978-9	28,518	28,567	26,160	26,160	1.70	56		—	3,000	—	4,137		—	
1979-0[2]	23,638	23,736	24,549	22,389	1.79	49			2,000	—	8,973		—	
1980-1[2]	15,784	16,189	16,265	16,483	1.91	51			450	—	12,192		—	
1981-2[2]	16,743	17,083	18,621	18,822	2.04	48			500	—	4,145			
1982-3[2]	20,119	19,924	20,817	20,954	2.17	48			1,600	—	3,095			
1983-4	26,058	25,698	28,152		2.25						6,312			
1984-5														

[1] Old-crop rye under loan at end of crop year. [2] Preliminary. [3] Derived by subtracting CCC stocks & loans outstanding from ending carryover. [4] Includes previous crops under reseal. *Source: Economic Research Service, U.S.D.A.* T.573

High, Low & Closing Prices of May Rye Futures in Winnipeg In Canadian Dollars per Tonne

Year of Delivery		Year Prior to Delivery							Delivery Year					Life of Delivery Range
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	—	91.50	99.00	112.20	117.00	119.00	113.50	112.80	114.80	118.00	109.00	119.00
	Low	—	—	82.30	90.00	96.80	105.90	109.50	107.50	104.50	107.90	103.30	98.50	82.30
	Close	—	—	89.90	97.20	111.20	111.00	114.50	108.00	107.90	113.00	105.50	108.50	—
1979	High	—	101.90	98.00	105.20	112.40	111.00	104.00	104.20	109.40	110.50	106.90	113.00	113.00
	Low	—	94.80	92.20	93.30	100.70	101.40	96.00	96.20	100.10	105.00	99.90	100.90	92.20
	Close	—	97.00	94.50	100.30	108.60	102.20	97.80	100.50	108.50	106.70	101.50	112.10	—
1980	High	154.00	188.00	167.50	189.40	191.00	181.00	175.00	192.50	195.00	205.50	196.50	195.50	205.50
	Low	117.50	148.50	139.50	159.40	171.50	170.50	160.80	163.50	182.00	176.00	173.80	168.50	117.50
	Close	143.50	158.00	159.40	184.00	181.50	172.10	169.40	183.00	186.00	187.60	178.50	195.50	—
1981	High	193.50	205.90	194.50	205.70	231.00	250.50	244.00	242.00	244.50	242.50	232.50	199.50	250.50
	Low	170.50	189.00	182.10	192.00	201.80	228.00	216.50	223.00	225.50	223.40	176.00	186.70	170.50
	Close	192.90	194.00	194.20	203.00	230.00	242.80	237.00	225.50	244.50	230.20	189.50	194.00	—
1982	High	167.00	181.50	215.90	233.50	218.00	195.60	187.00	185.20	187.30	171.00	178.00	180.90	233.50
	Low	151.20	154.90	183.50	211.20	193.00	181.50	169.80	168.70	169.50	158.50	160.00	163.40	151.20
	Close	151.20	181.50	215.90	217.70	194.20	183.40	171.00	182.00	169.50	160.30	170.00	165.50	—
1983	High	162.00	162.00	152.50	150.50	139.50	140.20	133.00	126.30	123.20	123.00	130.00	126.00	162.00
	Low	162.00	152.00	138.00	133.80	128.00	129.00	121.00	119.80	116.40	115.30	118.10	116.50	115.30
	Close	162.00	152.50	145.00	133.80	128.20	130.20	121.00	123.10	120.50	122.70	118.70	122.50	—
1984	High	—	—	174.00	176.00	173.30	165.80	158.30	150.00	141.00	140.00	139.30		
	Low	—	—	154.40	169.50	154.40	156.60	146.00	140.70	125.10	129.20	134.00		
	Close	—	—	170.10	170.50	162.50	157.70	148.90	141.00	129.30	138.20	135.50		

Source: Winnipeg Commodity Exchange T.576

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Commodity Research Bureau, Inc.
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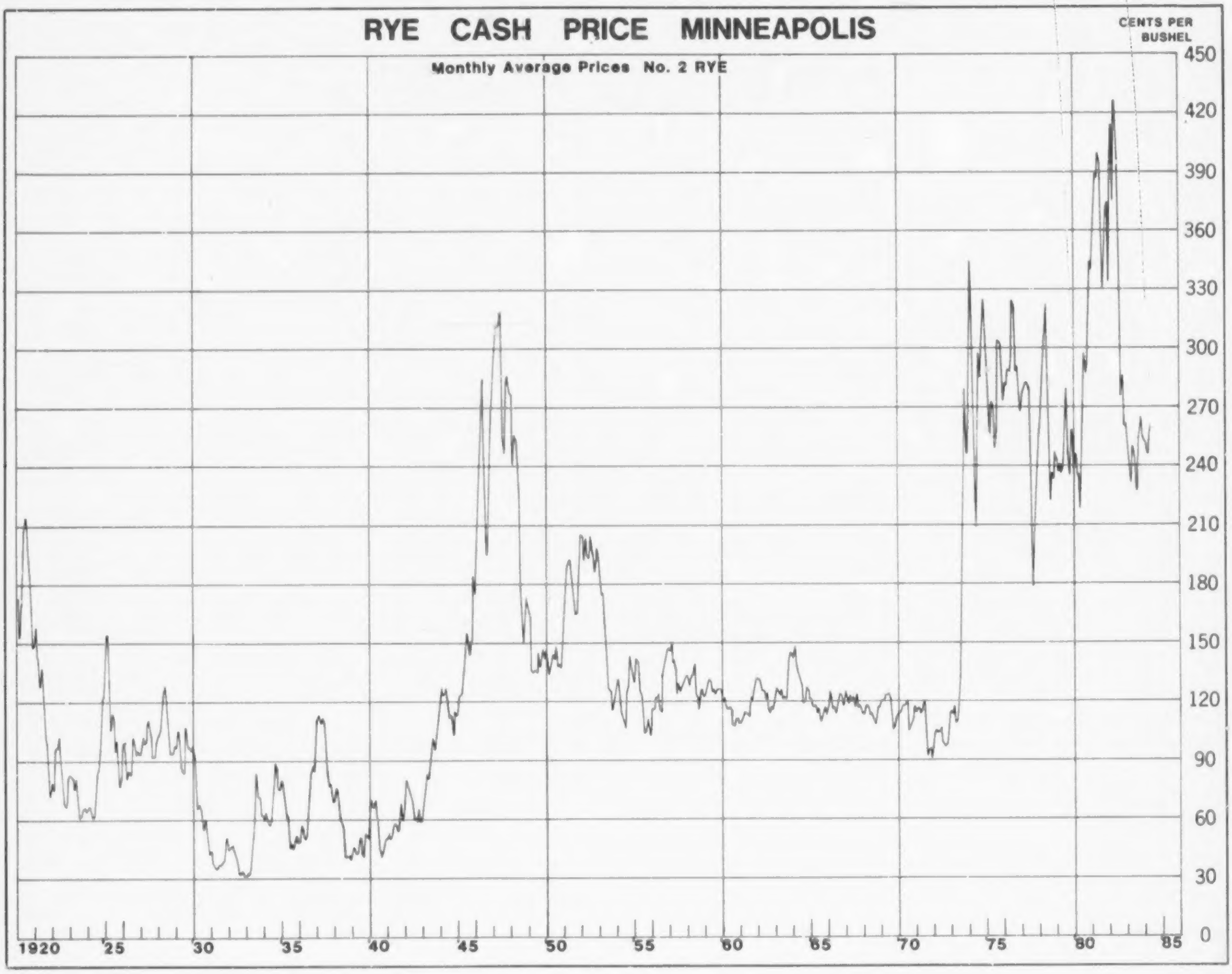

Average Price of Cash Rye No. 2 at Minneapolis In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1971-2	100	92	95	96	91	99	103	105	104	104	106	99	100
1972-3	98	97	98	105	114	115	113	117	109	110	123	132	111
1973-4	160	217	279	265	246	286	344	338	316	221	209	257	262
1974-5	297	289	307	325	319	305	293	280	256	272	270	249	288
1975-6	258	304	303	301	286	273	282	281	289	288	296	324	284
1976-7	322	288	290	277	268	270	277	280	282	282	279	253	287
1977-8	194	179	206	228	246	256	269	282	294	305	322	293	253
1978-9	259	222	236	233	247	244	237	241	236	238	244	273	244
1979-0	279	247	235	257	249	235	245	235	235	218	244	266	247
1980-1	297	287	292	307	344	340	352	363	389	387	396	394	346
1981-2	352	330	356	371	374	334	394	414	375	426	410	397	378
1982-3	342	276	286	260	261	256	251	246	231	250	244	232	261
1983-4	227	256	265	256	254	252	251	245	250				
1984-5													

Source: Economic Research Service, U.S.D.A. T.575

RYE

United States Rye Quarterly Supply and Disappearance In Millions of Bushels

	Supply				Disappearance							Ending Stocks		
					Domestic Use									
Periods Begin. June 1	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed[2]	Total	Exports	Total Disappearance	Gov't. Owned	Privately Owned	Total Stocks
1978–9	4.0	24.1	.1	28.2	3.7	2.4	4.6	8.1	18.8	.4	19.2	—	9.0	9.0
June–Sept.	4.0	24.1	.1	28.2	1.1	.5	2.3	1.8	5.7	[3]	5.7	—	22.5	22.5
Oct.–Dec.	22.5	—	—	22.5	1.1	.6	2.1	3.5	7.3	[3]	7.3	—	15.2	15.2
Jan.–Mar.	15.2	—	[3]	15.2	1.0	.7	.2	1.6	3.5	[3]	3.5	—	11.7	11.7
Apr.–May	11.7	—	[3]	11.7	.5	.6	—	1.2	2.3	.4	2.7	—	9.0	9.0
1979–0	9.0	22.4	[3]	31.4	3.5	2.1	4.0	7.1	16.7	2.4	19.2	.2	12.0	12.2
June–Sept.	9.0	22.4	[3]	31.4	1.2	.6	2.0	2.2	6.0	.6	6.6	.2	24.6	24.8
Oct.–Dec.	24.8	—	[3]	24.8	.9	.4	1.8	2.4	5.5	1.6	7.1	.2	17.5	17.7
Jan.–Mar.	17.7	—	[3]	17.7	.9	.6	.2	1.0	2.7	[3]	2.7	.2	14.8	15.0
Apr.–May	15.0	—	[3]	15.0	.5	.5	[3]	1.5	2.6	.2	2.8	.2	12.0	12.2
1980–81	12.2	16.5	[3]	28.7	3.5	2.1	4.2	7.3	17.0	7.5	24.5	.1	4.0	4.1
June–Sept.	12.2	16.5	[3]	28.7	1.2	.4	2.1	3.4	7.0	3.2	10.2	.2	18.3	18.5
Oct.–Dec.	18.5	—	[3]	18.5	1.0	.5	1.9	2.7	6.0	3.1	9.2	.3	9.0	9.3
Jan.–Mar.	9.3	—	[3]	9.4	.8	.7	.2	[3]	1.8	.7	2.5	.3	6.6	6.9
Apr.–May	6.9	—	[3]	6.9	.6	.5	[3]	1.2	2.3	.4	2.7	.1	4.0	4.1
1981–2[1]	4.1	18.8	[3]	23.4	3.5	2.2	4.2	8.9	18.8	1.5	20.3			4.0
June–Sept.	4.1	18.8	[3]	23.0	1.2	.4	2.1	4.7	8.4	[3]	8.4	.1	14.4	14.6
Oct.–Dec.	14.6	—	.1	14.6	.9	.6	1.9	1.9	5.3	1.4	6.7	.1	7.7	7.9
Jan.–Mar.	7.9	—	.3	8.0	.9	.8	.2	.2	2.1	.1	2.2			5.8
Apr.–May	5.8	—	.4	6.1	.5	.4	[3]	2.1	3.0	[3]	3.0			3.1
1982–3[4]	3.1	20.9	3.0	27.0	3.3	2.3	4.2	10.6	20.4	.2	20.6			6.4
June–Sept.	3.1	20.9	.8	24.7	1.2	.5	2.1	4.4	8.2	.1	8.3			16.5
Oct.–Dec.	16.5	—	1.0	17.5	.9	.6	1.9	3.2	6.6	[3]	6.6			10.9
Jan.–Mar.	10.9		.6	11.5	.8	.7	.2	1.8	3.5	.1	3.5			8.0
Apr.–May	9.0		.6	8.5	.5	.4	—	1.2	2.1	—	2.1			6.4
1983–4														
June–Sept.														

[1] Preliminary. [2] Residual. [3] Less than 50,000 bushels. [4] Estimate. *Source: Economics Service, U.S.D.A.* T.574

Rye Under Price Support Through the End of the Month (Cumulative Total from Current Season's Crop) In Thousands of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1974–5	39	178	190	193	194	194	196	196	196	196	196	196	196
1975–6	8	59	59	63	64	85	87	87	87	87	87	87	87
1976–7	10	21	58	66	91	105	110	123	146	144	144	144	144
1977–8	74	250	647	719	769	800	858	887	917	914	913	913	913
1978–9	114	1,467	2,064	2,325	2,537	2,626	2,818	2,857	3,001	3,031	3,036	3,050	3,050
1979–0	5	338	765	1,106	1,313	1,397	1,592	1,653	1,790	1,882	1,900	1,905	1,905
1980–1	—	97	240	297	348	384	396	399	402	406	406	406	
1981–2	36	264	359	398	424	439	448	456	456	456	456	456	
1982–3	7	344	771	1,008	1,096	1,193	1,324	1,369	1,588	1,709	1,711	1,712	
1983–4	83	1,819	2,228	3,533	3,885	4,199	4,577	4,862	5,141				
1984–5													

Source: U.S. Department of Agriculture T.578

Month End Open Interest of Rye Futures in Winnipeg In 20 Tonne Units

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	2,062	2,242	2,428	2,600	2,306	2,414	2,757	2,969	2,646	2,951	2,598	2,206
1979	2,556	3,238	3,494	3,042	3,372	5,617	6,332	5,988	6,872	6,293	5,751	4,808
1980	4,648	5,028	5,379	6,172	3,313	5,229	5,348	4,839	5,814	6,106	4,250	3,428
1981	3,876	4,811	3,704	3,640	2,948	3,368	5,028	6,440	5,251	2,516	4,404	3,828
1982	3,739	3,622	3,219	3,583	4,426	3,008	2,268	4,286	5,250	4,052	3,773	3,244
1983	3,227	3,628	3,097	4,625	4,834	4,935	7,883	7,915	3,665	4,494	3,110	3,054
1984	2,224	4,566	3,980	3,883								
1985												

Source: Winnipeg Commodity Exchange T.577

Safflower Oil

Safflower Oil Supply & Distribution in the U.S. In Million Pounds

Crop Year Begin. Oct. 1	Supply			Distribution			Factory Consumption[2]							
	Stocks Oct. 1	Production	Total	Exports	Domestic Disapp.	Total	Salad & Cooking Oils	Margarine	Shortening	Other Edible	Paint & Varnish	Other Inedible	Loss	Total
1970	19	120	149	20	100	120	12	22	1.2	4	8.3	7.1	.7	49.3
1971	29	140	169	40	90	130	11	19		3				
1972	39	150	189	40	118	158	22	20		2				
1973	31	100	131	25	98	123	29	32		1				
1974	8	115	123	25	75	100	17	16		10				
1975	25	100	125	25	75	100	22	7		—				
1976[1]	44	75	119	15	70	85	22	10		—				
1977[1]	25	119	120	25	74	99		8						
1978[1]	41	126	141	25	85	110		10						
1979[1]	31	139	131	25	75	100		5						
1980[1]		70												
1981[1]		68												
1982														

[1] Preliminary. [2] Data are for calendar year shown. *Sources: Bureau of Census; Economic Research Service, U.S.D.A.* T.579

Safflower Oil Wholesale Price Tanks (Non-break), New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	17.7	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.3
1972	18.4	18.4	18.4	18.4	18.4	18.4	18.7	19.6	19.6	19.6	19.6	19.6	18.9
1973	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
1974	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	55.0	55.0	55.0	28.4
1975	65.5	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	52.8	47.0	52.0	64.1
1976	52.0	52.0	52.0	52.0	52.0	52.0	52.0	47.0	41.0	41.0	41.0	41.0	46.2
1977	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5
1978	41.0	41.0	41.0	41.0	41.0	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.4
1979	41.0	41.0	41.5	41.5	41.5	41.5	41.5	—	—	—	—	—	41.3
1980	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.0	46.0	46.0	46.0	46.0	46.3
1981	46.0	46.0	46.0	46.0	46.5	46.5	46.5	46.5	72.5	72.5	72.5	72.5	55.0
1982	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5
1983	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5
1984													

Source: Economic Research Service, U.S.D.A. T.580

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Salt

World resources of salt are virtually unlimited. Domestic resources of rock salt and salt from brine are located in the northeast, central western, and southern Gulf Coast States. Saline lakes and solar evaporated salt facilities are close to populated regions in the Western U.S. Nearly every country in the world has salt deposits or solar evaporation operations of various sizes. However, some countries must import additional quantities of salt to meet consumption requirements. There are virtually no substitutes or alternates for salt. Calcium chloride, hydrochloric acid, and potassium chloride can be substituted for salt in deicing, certain chemical processes, or food flavoring, but at higher cost. The right to explore for the mine salt on public land is covered under the Mineral Leasing Act of 1920. The Minerals Management Service sets royalty rates and assures compliance with lease terms including environmental requirements.

Preliminary figures indicated that the consumption of salt in the chlor-alkali industry declined in 1982 because chlorine and caustic soda production decreased about 15 percent. The demand for chlorine was expected to continue weak through 1983. It was estimated that, in 1983, domestic mine production of salt would be 41 million tons, and that U.S. apparent consumption would be around 42 million tons.

World Production of All Salt In Thousands of Short Tons

Year	Brazil	Canada	China	France	W. Germany	India	Italy	Japan	Netherlands	Poland	Spain	United Kingdom	United States	USSR	World Total
1976	2,726	6,607	22,046	6,491	12,475	5,070	4,423	1,125	3,336	4,209	3,481	8,825	44,218	15,650	177,105
1977	3,058	6,657	18,850	6,367	13,583	5,877	5,092	1,164	3,429	4,803	3,428	9,041	43,439	15,760	173,107
1978	3,637	7,112	21,528	6,926	13,953	7,385	5,436	1,183	3,240	4,843	3,714	8,058	42,896	15,983	185,462
1979	3,918	7,585	16,281	8,882	16,633	7,755	6,249	1,189	4,355	4,882	3,801	8,619	45,820	15,763	191,173
1980	4,230	7,748	19,048	7,830	12,561	8,026	5,806	1,226	3,818	4,998	3,867	7,887	40,378	16,094	185,626
1981[1]	3,974	7,981	20,194	7,315	13,824	9,836	5,031	1,133	3,944	4,708	4,090	7,408	38,915	16,755	187,781
1982[2]	3,900	8,900	17,600	7,330	12,700	11,004	5,000	1,200	4,000	4,700	4,000	7,600	37,896	17,000	186,005
1983[2]		9,000	19,000	7,400	12,800	12,000	5,000			5,000		7,500	31,500	18,000	183,000

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.581

Salient Statistics of the Salt Industry in the United States In Thousands of Short Tons

		Sold or Used by Producers														
		Evaporated (Mfg.)					Rock Salt							Exports		
		Bulk														
Year	Net Import Reliance as a % of Apparent Consumption	Open Pans or Grainers	Vacuum Pans	Solar	Pressed Blocks	Total Evaporated	Bulk	Pressed Block	Total Salt Rock	Salt in Brine	Total Salt	Value[3] Million $	Imports for Consumption	Total	To Canada	Apparent Consumption
1974		540	3,032	1,910	440	5,922	14,753	82	14,835	25,779	46,536	360.8	3,358	521	464	49,373
1975	4	526	2,801	1,583	436	5,345	14,200	84	14,283	21,401	41,030	368.1	3,215	1,332	1,315	42,913
1976	7	536	2,908	1,752	412	5,607	15,592	76	15,668	22,917	44,191	431.0	4,352	1,007	958	47,536
1977	8	—3,481—		1,808	388	5,677	14,893	65	14,958	22,777	43,412	451.6	4,529	1,008	963	46,933
1978	10	—3,463—		2,001	381	5,845	14,630	58	14,688	22,336	42,869	499.3	5,380	776	750	47,473
1979	10	—3,726—		2,104	391	6,221	14,827	64	14,891	24,681	45,793	538.4	5,275	697	681	50,371
1980	7	—3,587—		2,334	393	6,314	11,742	65	11,806	22,231	40,352	656.2	5,263	831	800	44,784
1981	8	—3,500—		2,298	404	6,201	11,809	62	11,871	20,835	38,907	637.6	4,319	1,046	1,011	42,180
1982[1]	11	—3,391—		2,441	430	6,262	13,460	72	13,532	18,086	37,880	671.1	5,451	1,001	957	42,330
1983[2]	8										31,500		5,500	1,000		36,000

[1] Preliminary. [2] Estimate. [3] Values are f.o.b. mine or refinery & do not include cost of cooperage or containers. *Source: Bureau of Mines* T.582

Salt Sold or Used by Producers in the U.S. by Classes & Consumers or Uses In Thousands of Short Tons

Year	Chlorine, Caustic Soda Ash	Flour Processors	Textile & Dyeing	Meat Packers, Tanners, Etc.[2]	Canning	Baking	U.S. Govt.	Feed Dealers	Feed Mixers	Rubber	Oil	Paper & Pulp	Metals	Water Softener Mfg.[3]	Grocery Stores	Flour Proc.	Highway Use
1974	27,643		205	591	241	118	90	1,512	471	157	242	165	252	835	1,252	85	7,757
1975	23,444	101	180	579	259	125	119	1,310	552	127	261	172	265	586	991	101	7,680
1976	25,008	98	204	578	257	126	74	1,332	593	108	312	213	342	580	998	98	8,930
1977	24,142	95	196	569	255	112	72	1,269	556	125	361	222	351	650	1,043	95	8,678
1978	23,735	91	182	540	254	111	86	1,197	654	96	451	221	346	764	1,057	91	8,487
1979	26,200	95	188	546	280	119	78	1,194	723	99	550	194	356	810	1,140	95	8,742
1980	23,941	92	177	546	287	113	121	1,172	662	95	709	230	272	686	995	92	6,389
1981	22,241	82	180	491	230	109	126	1,147	646	113	820	246	299	700	1,021	82	6,725
1982[1]	18,578	83	165	550	204	109	152	972	699	51	1,035	209	294	718	1,053	83	9,057

[1] Preliminary. [2] Also casing mfg. [3] Also service companies. *Source: Bureau of Mines* T.583

Sheep and Lambs

The world sheep inventory at the beginning of 1984 was projected to be 660.5 million head in the 29 major producing countries compared with 657.2 million on January 1, 1983 and 664.7 million beginning on the same date in 1982. Of these 29 countries, the three largest producers of sheep are the Soviet Union, Australia (where sheep raising is more financially attractive than cattle raising in some cases), and New Zealand. Australia was expected to have an inventory of 134.5 million head of sheep at the start of 1984.

Prospects for U.S. sheep producers during 1984 are expected to be a little brighter because of higher prices for lambs and for wool and because of prospects for lower feed prices. On January 1, 1984, the U.S. inventory of sheep and lambs totaled 11.4 million head, down 5 percent from a year earlier. The inventory of stock sheep totaled 9.7 million head, 7 percent below the 1983 level. The 1983 lamb crop of 8.15 million head was 5 percent below a year earlier. The 1983 lambing rate was 99 lambs per 100 ewes one year and older vs. 98 lambs in 1982 and 101 lambs in 1981.

As of January 1, 1984, the number of lambs and sheep on feed in the 24 major feeding states totaled 1.71 million, up 4 percent from a year earlier. However, the 5 percent smaller 1983 lamb crop indicated reduced commercial lamb and mutton production during 1984. The 1984 lamb crop will provide animals for slaughter through the fall of 1984. Considering that inventory of ewes one year and older totaled 7.82 million head, the lamb crop in 1984 could total 7.77 million head, down 5 percent from 1983.

World Sheep Numbers in Specified Countries In Millions of Head

Year	India	Argentina	Australia	Brazil	Peru	Iran	New Zealand	Spain[2]	Turkey	United Kingdom	United States	South Africa	Uruguay	USSR	China[4]	World[5]
1971		39.0	177.8	25.0	16.9	32.0	58.9	18.4	36.5	18.5	19.7	31.6	18.5	138.1	71.0	1,038
1972		40.0	162.9	25.5	12.5	32.0	60.9	17.9	36.8	18.7	18.7	30.2	16.3	139.9	71.3	1,022
1973		41.0	140.0	26.0	13.0	34.0	56.7	17.2	38.8	19.6	17.7	33.3	17.0	139.1	71.6	1,009
1974		41.0	145.2	26.5	13.5	35.0	55.9	16.3	40.1	20.2	16.4	33.6	15.1	142.6	71.9	1,022
1975		38.5	151.7	25.0	15.3	36.5	55.3	16.3	40.5	20.2	14.5	31.6	14.9	145.3		
1976		35.0	148.6	17.3	15.0	33.5	56.4	15.7	41.4	19.5	13.3	31.8	15.7	141.4		718
1977	40.4	35.2	135.4	17.2	14.5	33.0	59.1	14.5	41.5	19.9	12.8	32.6	16.6	139.8		690
1978	40.7	34.2	131.4	17.2	14.0	33.0	62.2	14.5	42.7	20.5	12.4	32.6	18.9	141.0		695
1979	41.0	32.8	134.2	17.8	14.0	32.5	63.5	13.8	43.9	21.7	12.4	32.5	20.7	142.6		708
1980	40.5	32.0	136.0	18.0	13.5	32.0	63.5	16.1	46.0	21.7	12.7	34.9	23.3	143.6		653
1981	40.7	30.0	134.4	18.0	13.5		68.8	16.5	48.6	21.6	12.9	33.8	24.1	141.6	187.0	657
1982[1]	40.8	29.0	138.0	18.0	13.0		69.9	17.1	49.6	22.2	13.0	34.2	23.4	142.4		665
1983[3]	40.8	28.0	133.2				70.3	15.0	50.3	22.9	12.0	33.2	23.6	142.2		657
1984[3]	40.9	28.0	134.5				70.2	15.0	50.5	23.2	11.4	31.9	23.6	144.8		662

[1] Preliminary. [2] One year old & older. [3] Estimate. [4] Mainland. [5] From 1976 to date equals total of selected countries. *Source: Foreign Agricultural Service, U.S.D.A.*
T.584

Salient Statistics of Sheep & Lambs in the United States

Year	On Hand Jan. 1	Lambs Saved	In Shipments	Marketings[2]	Slaughter		Production	Marketings[2]	Value of Production	Cash Receipts[3]	Value of Home Consumption	Gross Income	Farm Value (1/1)	
					Farm	Total[4]							All	$ per Head
	Mil. Head		Ths. Head				Mil. Lbs.		Millions of Dollars					
1971	19.7	13.0	4,004	14,829	236	10,965	1,071	1,447	250.2	323.0	5.4	328.4	465.4	23.60
1972	18.7	12.6	3,976	14,553	224	10,525	1,004	1,411	271.4	353.8	5.7	359.5	428.9	22.90
1973	17.7	11.5	3,275	13,077	302	9,799	896	1,278	293.7	389.6	6.9	396.5	470.8	26.70
1974	16.4	10.5	2,629	12,060	217	9,064	807	1,178	272.0	368.7	7.9	376.6	534.8	32.80
1975	14.5	9.9	2,349	10,851	212	8,047	785	1,077	303.3	385.8	8.5	394.3	442.5	30.50
1976	13.3	8.9	2,469	9,615	202	6,911	733	970	315.6	393.1	9.2	402.3	496.3	37.30
1977	12.8	8.6	2,148	8,811	198	6,555	706	883	320.3	386.4	9.9	396.2	540.2	42.50
1978	12.3	7.9	2,148	7,968	174	5,543	688	838	381.6	452.9	11.2	464.2	641.5	51.60
1979	12.4	8.0	2,136	7,678	172	5,189	709	812	410.1	474.2	11.7	485.9	891.0	72.10
1980	12.7	8.3	2,216	8,112	165	5,579	744	852	401.5	469.7	11.6	481.3	992.1	78.20
1981	12.9	8.8	1,862	8,597	189	6,007	770	884	358.5	415.7	12.4	428.1	903.3	69.80
1982	13.0	8.5	2,120	9,589	194	6,500	774	1,033	351.2	447.4	13.0	460.3	739.6	57.00
1983[1]	12.0	8.2											622.5	51.80
1984[1]	11.4												594.5	52.10

[1] Preliminary. [2] Excludes interfarm sales. [3] Includes receipts from marketings & from sales of farm slaughter meats. [4] Includes all commercial & farm. *Source: Crop Reporting Board, U.S.D.A.*
T.585

SHEEP AND LAMBS

Sheep and Lambs on Farms in the United States, January 1 In Thousands of Head

	All Sheep and Lambs[2]														
Year	Minnesota	California	Colorado	Idaho	Missouri	Montana	New Mexico	Ohio	South Dakota	Texas	Utah	Wyoming	Iowa	Total[2]	Total[1] Stock
1971	504	1,264	1,274	828	251	1,067	742	687	1,201	3,789	1,009	1,829	765	19,731	16,946
1972	467	1,113	1,220	728	230	1,000	714	672	1,181	3,524	976	1,735	735	18,739	15,835
1973	445	1,071	1,204	707	215	955	743	623	1,161	3,214	905	1,678	660	17,641	14,852
1974	415	1,132	1,140	684	224	794	672	582	976	3,090	772	1,505	531	16,310	13,744
1975	390	1,070	990	595	194	770	575	517	792	2,688	697	1,350	460	14,515	12,436
1976	315	1,052	920	536	168	635	590	500	686	2,600	590	1,265	385	13,311	11,427
1977	275	1,113	830	503	134	570	560	445	659	2,520	580	1,206	388	12,766	11,035
1978	255	1,115	810	536	131	530	571	370	704	2,460	491	1,115	370	12,348	10,725
1979	255	1,150	795	466	126	475	604	350	740	2,415	486	1,080	380	12,365	10,786
1980	264	1,175	870	468	123	574	660	320	783	2,400	625	1,050	408	12,687	11,065
1981	295	1,205	810	512	138	595	650	310	780	2,360	650	1,110	437	12,936	11,287
1982	335	1,210	710	498	133	616	615	313	750	2,400	636	1,130	485	12,966	11,402
1983[3]	300	1,115	750	429	116	560	610	275	680	2,225	565	1,060	457	12,026	10,385
1984[3]														11,411	9,703

[1] Stock sheep & lambs; does not include sheep & lambs on feed for market. [2] Includes sheep & lambs on feed for market and stock sheep & lambs. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.586

Average Wholesale Price of Lambs at Omaha In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	24.00	25.12	26.88	30.25	31.12	31.25	28.88	27.75	27.50	25.88	24.75	25.75	27.43
1972	27.88	28.38	29.38	31.00	33.75	34.00	32.88	31.25	30.00	26.75	27.00	29.25	30.13
1973	33.62	39.25	40.75	34.25	36.25	38.00	39.25	41.50	33.38	31.75	34.75	37.50	36.69
1974	38.38	40.00	37.50	39.50	47.25	46.25	41.25	39.00	36.12	35.88	37.50	38.50	39.76
1975	37.50	40.50	43.00	47.88	50.75	46.12	45.00	41.00	44.12	44.00	45.00	48.13	44.42
1976	49.33	47.75	53.50	60.75	63.88	50.50	45.75	38.88	40.00	39.75	39.00	45.00	47.84
1977	49.00	50.25	51.50	56.75	56.25	53.00	50.75	51.87	55.75	56.88	50.00	58.50	53.38
1978	64.00	68.00	69.38	64.80	71.00	59.50	60.00	59.25	62.50	60.00	59.50	64.00	63.49
1979	73.75	71.25	61.25	70.50	70.75	65.00	61.52	60.62	67.00	64.50	65.00	67.75	66.58
1980	64.60	62.71	64.64	56.12	67.62	65.78	66.99	66.98	64.88	61.77	55.67	53.13	59.81
1981	50.00	53.50	55.25	59.25	65.00	66.42	47.33	54.10	48.53	49.86	45.27	45.10	52.23
1982[1]	49.75	51.50	59.00	59.50	66.25	60.50	57.25	50.50	50.00	48.25	46.75	48.50	53.98
1983[1]	53.50	58.50	59.75	58.75	59.00	53.00	51.12	49.25	48.50	51.75	56.00	57.75	54.74
1984[1]	60.50												

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

T.587

Federally Inspected Slaughter of Sheep & Lambs in the United States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	903	806	920	899	772	827	815	812	919	919	818	846	10,256
1972	847	801	903	786	803	807	737	840	866	937	828	751	9,905
1973	835	700	710	690	858	727	807	844	789	915	747	612	9,234
1974	749	612	772	782	670	581	713	777	842	851	612	595	8,556
1975	663	570	648	627	616	614	635	621	758	701	515	584	7,552
1976	582	513	570	561	429	502	525	563	622	556	517	534	6,474
1977	498	461	579	539	474	550	468	553	568	525	477	441	6,133
1978	425	390	487	430	451	441	406	438	435	457	413	396	5,169
1979	391	354	431	425	421	371	384	415	410	455	386	389	4,833
1980	448	419	470	466	454	400	420	427	466	510	415	468	5,363
1981	488	426	488	512	426	440	439	467	546	558	476	522	5,789
1982	510	490	570	1,493			1,577			1,634			6,273
1983	509	457	617	506	508	508	497	585	595	580	510	536	6,410
1984													

Source: Economic Research Service, U.S.D.A.

T.588

Cold Storage Holdings of Lamb and Mutton, on 1st of Month In Thousands of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	19,336	20,526	19,653	20,403	20,221	22,506	22,848	21,292	19,391	20,719	20,059	18,626
1972	19,260	16,355	12,836	12,238	15,205	19,916	19,277	21,272	21,220	19,171	18,226	17,200
1973	15,704	14,258	11,847	10,920	13,210	15,644	16,004	14,451	12,739	13,083	15,517	14,691
1974	15,034	12,465	13,018	13,749	14,149	16,820	15,909	15,977	15,333	14,198	14,894	14,169
1975	13,690	12,154	11,221	9,254	9,963	8,819	7,388	9,089	10,107	10,749	10,765	11,543
1976	11,785	10,808	11,123	9,244	9,626	10,935	12,261	14,461	15,152	16,958	15,678	16,552
1977	14,535	14,131	13,884	11,813	12,771	14,583	14,381	13,848	13,567	11,630	10,097	9,356
1978	10,096	9,261	8,628	7,947	9,176	10,149	10,011	11,891	11,259	11,323	12,200	11,804
1979	11,716	10,965	10,827	12,022	12,072	12,897	11,483	11,943	11,763	10,951	11,697	11,071
1980	10,751	10,302	9,464	7,945	8,475	8,995	10,229	10,263	8,880	8,336	8,165	9,779
1981	9,142	8,997	7,843	7,823	10,196	10,403	12,297	12,564	13,694	13,311	12,676	11,362
1982	10,540	9,569	8,449	8,783	—	—	8,266	—	—	8,571	—	—
1983[1]	8,653	7,682	7,673	8,218	8,331	8,839	8,691	7,717	8,815	8,622	9,092	10,270
1984[1]	10,701	8,312	7,542	8,063								
1985												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.589

Average Price Received by Farmers for Sheep in the U.S. In Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1971	6.90	7.03	7.34	7.08	6.87	6.50	6.23	6.78	6.39	6.05	6.13	6.22	6.63
1972	6.17	6.69	7.12	6.74	7.08	6.92	7.08	7.32	7.33	7.31	7.78	8.35	7.16
1973	9.36	10.80	12.10	12.10	11.40	12.00	12.40	15.70	13.50	13.30	13.00	14.20	12.50
1974	14.70	15.80	15.10	13.60	12.20	10.60	10.50	10.90	9.80	8.20	8.10	8.90	11.50
1975	9.85	10.30	10.60	11.70	11.60	11.30	11.80	10.80	11.30	10.80	10.80	11.80	11.10
1976	12.60	12.80	13.90	15.30	14.70	12.80	13.40	12.90	12.90	11.90	11.50	13.00	13.10
1977	13.80	13.90	15.40	14.40	13.00	12.00	12.30	12.40	13.40	13.20	14.10	14.60	13.50
1978	16.50	18.40	19.70	19.50	19.20	19.30	19.40	20.80	24.40	24.90	24.70	25.50	21.80
1979	26.20	26.30	28.10	31.00	27.90	24.00	25.10	24.30	26.50	27.20	26.30	25.00	26.30
1980	27.40	30.50	26.90	21.90	21.70	20.30	17.80	19.40	21.40	18.90	19.90	20.80	21.10
1981	27.40	29.00	26.10	23.40	19.50	20.30	23.00	20.40	20.30	19.70	19.10	19.20	21.20
1982	25.10	21.30	27.20	22.20	21.00	22.00	21.00	18.60	16.50	15.20	15.30	16.80	19.50
1983[2]	21.30	21.90	20.80	17.40	15.20	14.50	16.20	15.50	12.80	13.80	15.10	17.00	15.70
1984[2]	18.20	19.60	18.70	17.10									
1985													

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.590

Average Price Received by Farmers for Lambs in the U.S. In Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1971	23.10	23.90	25.50	26.70	27.10	28.10	27.10	27.40	25.90	25.40	25.20	25.40	25.90
1972	26.90	28.20	28.70	28.60	30.40	30.70	31.40	30.20	29.10	28.20	27.60	28.70	29.10
1973	32.60	35.30	39.20	35.10	33.60	36.20	35.40	41.80	33.10	32.50	33.80	35.40	35.30
1974	39.30	39.20	36.00	37.40	41.20	42.70	37.90	37.50	33.20	33.20	35.20	36.10	37.40
1975	36.80	37.90	39.80	43.00	45.70	44.80	43.10	39.90	40.50	42.60	44.20	46.30	42.10
1976	47.90	47.20	50.20	54.90	60.10	51.10	46.80	41.50	41.80	42.60	41.90	44.70	47.60
1977	48.30	49.60	49.10	50.80	55.00	50.90	50.60	49.10	51.30	52.60	52.40	56.90	51.30
1978	60.70	63.20	67.10	63.90	66.50	61.80	58.80	58.50	63.70	62.50	61.40	65.70	62.80
1979	74.10	69.90	64.90	70.40	69.70	66.40	64.00	61.40	66.70	65.70	64.90	66.90	66.70
1980	66.40	64.40	67.10	59.20	60.30	64.60	65.30	65.80	66.70	64.30	59.90	58.40	63.60
1981	54.10	55.40	56.50	58.80	63.10	65.00	59.50	56.20	50.40	50.60	47.40	47.50	54.90
1982	50.40	53.30	60.30	61.50	63.50	57.80	56.30	52.90	50.90	49.10	47.70	50.90	53.10
1983[2]	55.50	60.50	63.20	61.50	59.60	54.20	49.80	48.30	47.50	50.90	55.80	58.90	53.90
1984[2]	60.00	59.20	58.20	59.90									
1985													

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.591

Silk

Salient Statistics of Silk in the United States

Year	World Production (Raw) Million Lbs.	U.S. Unmanufactured[1] Imports[2] (By Country of Origin)										U.S. Silk Imports[2] —Mil. Lbs.—		Mill Consumption	
		Total Imports	Brazil	United Kingdom	Hong Kong	India	Italy	Japan	Switzerland	China	Korea	Raw	Waste	Total Mil. Pounds	Per Capita Pounds
		Thousands of Pounds													
1971	90	1,702	38	—	—	—	345	1,154	—	—	74	.3	1.4	1.7	.10
1972	93	2,139	76	—	—	—	227	1,339	—	—	106	.6	1.6	2.1	—
1973	95	3,342	79	13	—	—	472	2,197	—	—	15	.6	2.8	3.3	—
1974	99	2,593	145	0	—	—	397	1,476	—	—	107	.4	2.2	2.6	—
1975	104	968	176	1	—	—	0	386	—	353	0	.6	.4	1.0	—
1976	106	2,653	247	1	—	—	98	1,727	—	457	—	.7	1.9	2.8	—
1977	108	1,621	106	0	—	—	0	1,230	—	268	0	.4	1.2	1.6	—
1978	112	1,989	182	0	—	107	1	918	—	607	119	.7	1.3	2.0	—
1979	121	1,565	193	—	—	—	—	602	—	747	—	.8	.8	1.5	—
1980	123	1,053	139	—	5	—	—	108	—	713	71	.5	.6	1.5	—
1981	126	1,983	176	—	29	—	223	175	—	1,280	0	.8	1.2	2.0	—
1982[3]	121	4,219	224	—	94	—	223	256	—	3,311	0	1.4	2.8	2.0	—
1983[4]														2.0	—

[1] In skeins, wild or tussah, cocoons, and waste. [2] Imports for consumption. [3] Preliminary. [4] Estimate. *Sources: Department of Commerce; Textile Organon*

T.592

Raw Silk Deliveries in the U.S. In Bales (132 Lbs.—60 Kilos)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	247	205	187	277	228	129	192	241	247	355	165	253	2,726
1972	233	184	308	198	141	195	182	445	529	209	229	313	3,166
1973[1]	556	355	450	499	393	119	577	214	71	93	105	246	3,678
1974	124	305	233	277	175	288	269	139	97	302	151	96	2,456
1975	190	188	410	393	394	219	380	219	505	585	225	641	4,349
1976	925	469	689	362	251	579	337	358	422	268	222	159	5,041
1977	352	239	242	212	254	259	322	311	370	424	322	433	3,740
1978	321	394	424	382	397	299	316	341	401	280	468	214	4,237
1979	501	302	687	353	471	418	407	756	492	490	368	518	5,763
1980	312	644	422	507	366	285	257	332	342	365	265	323	4,420
1981	471	380	471	446	322	529	300	259	348	414	487	611	5,038
1982	450	489	662	398	234	369	495	403	364	226	514	317	4,921
1983	280	506	390	462	717	377	264	474	534	529	587	324	5,444
1984													

[1] Includes re-exports from 1973. *Source: International Silk Association*

T.593

How to keep your Commodity Year Book statistics up-to-date continuously throughout the year.

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Commodity Research Bureau, Inc.

75 MONTGOMERY ST., JERSEY CITY, N.J. 07302

Silver

World mine production of silver in 1983 was close to 5 percent above 1982 output, according to preliminary data of the U.S. Bureau of Mines. However, U.S. mine production of recoverable silver in 1983 was less than one percent above the 1982 level.

U.S. refinery production of silver in 1983 totaled 117.4 million troy ounces, up 7.5 percent from 1982 production. Refinery output from domestic and foreign concentrates and ores increased 14 percent in 1983, to 50.4 million ounces. Production from old scrap in 1983 was 7 percent less than in 1982, while production from new scrap increased 10 percent, to 41.6 million ounces.

Imports of silver into the U.S. for consumption, mostly refined bullion, increased 53 percent in 1983, to 179.9 million ounces. The United Kingdom accounted for 35 percent of total imports; Canada—20 percent; Mexico—17 percent; and Peru—13 percent.

Net U.S. industrial consumption of silver in 1983, at 117.1 million troy ounces, was 1.5 percent below the 118.8 million ounces consumed in 1982. However, the 2.1 million ounces of silver consumed in coinage was 15 percent larger than a year earlier. This was the largest amount used in coinage since 1976, reflecting the minting of the 1983 Olympic dollar and the George Washington commemorative half dollar. U.S. consumption of silver declined in 1983 for electroplated ware, dental and medical supplies, brazing alloys and solders, batteries, and contacts and conductors. The consumption of silver in photographic materials, at 51.8 million ounces, was virtually unchanged in 1983 from a year earlier, and accounted for 44 percent of total net industrial use. Contacts and conductors accounted for 22 percent of consumption; sterling ware—6 percent; jewelry—about 6 percent; and brazing alloys and solders—nearly 6 percent. The most significant percentage changes in 1983 by category of use were: a 63 percent increase in coins, medallion and commemorative objects; and a 36 percent drop in silver use in batteries.

Industry stocks of silver in the U.S. on December 31, 1983, held by refiners, dealers and fabricators amounted to 20.7 million troy ounces, 14 percent below the year-earlier level. Treasury bullion stocks, available to defense contractors, totaled 34.6 million ounces vs. 36.8 million a year earlier. Commodity Exchange, Inc. licensed warehouse stocks of silver amounted to 127.4 million ounces on December 31, 1983, compared with 90.7 million at the end of 1982. Chicago Board of Trade licensed warehouse stocks of silver were 23.8 million ounces at the end of 1983 vs. 15.5 million a year earlier. The U.S. National Defense Stockpile at the end of 1983 still held 137.5 million troy ounces of silver, awaiting completion of a Presidential study to determine whether there is an excess of silver in the stockpile; and if there is a surplus, how to dispose of it.

According to a report prepared for the U.S. Bureau of Mines in 1982, unreported stocks of silver in coins and bullion have been estimated at 1.6 billion troy ounces in the United States. Of this amount, nearly 1.0 billion ounces are believed to be widely held among the general populace in the form of coins, with the remainder probably held by a more limited group of individuals in the form of bullion. In addition to the silver in coins and bullion, individuals are estimated to hold around 850 million ounces of silver in the form of sterling ware.

U.S. (N.Y.) silver prices, as quoted by Handy & Harman, generally trended lower from the February 16, 1983 quotation of $14.74 per troy ounce—the highest level in about two years—to $10.13 in late March before recovering to $13.60 at the end of May. Prices eventually dropped to the low for 1983 of $8.34 on November 17. Spot silver prices ended the year at $8.95 per ounce, and dropped to $7.92 by January 9 before recovering to the $9.50 to $10.00 area in March 1984.

Futures Markets

Silver futures are traded on the Commodity Exchange, Inc. in New York, and on the Chicago Board of Trade and MidAmerica Commodity Exchange—both in Chicago. Futures trading is also conducted on the London Metal Exchange and the Winnipeg Commodity Exchange.

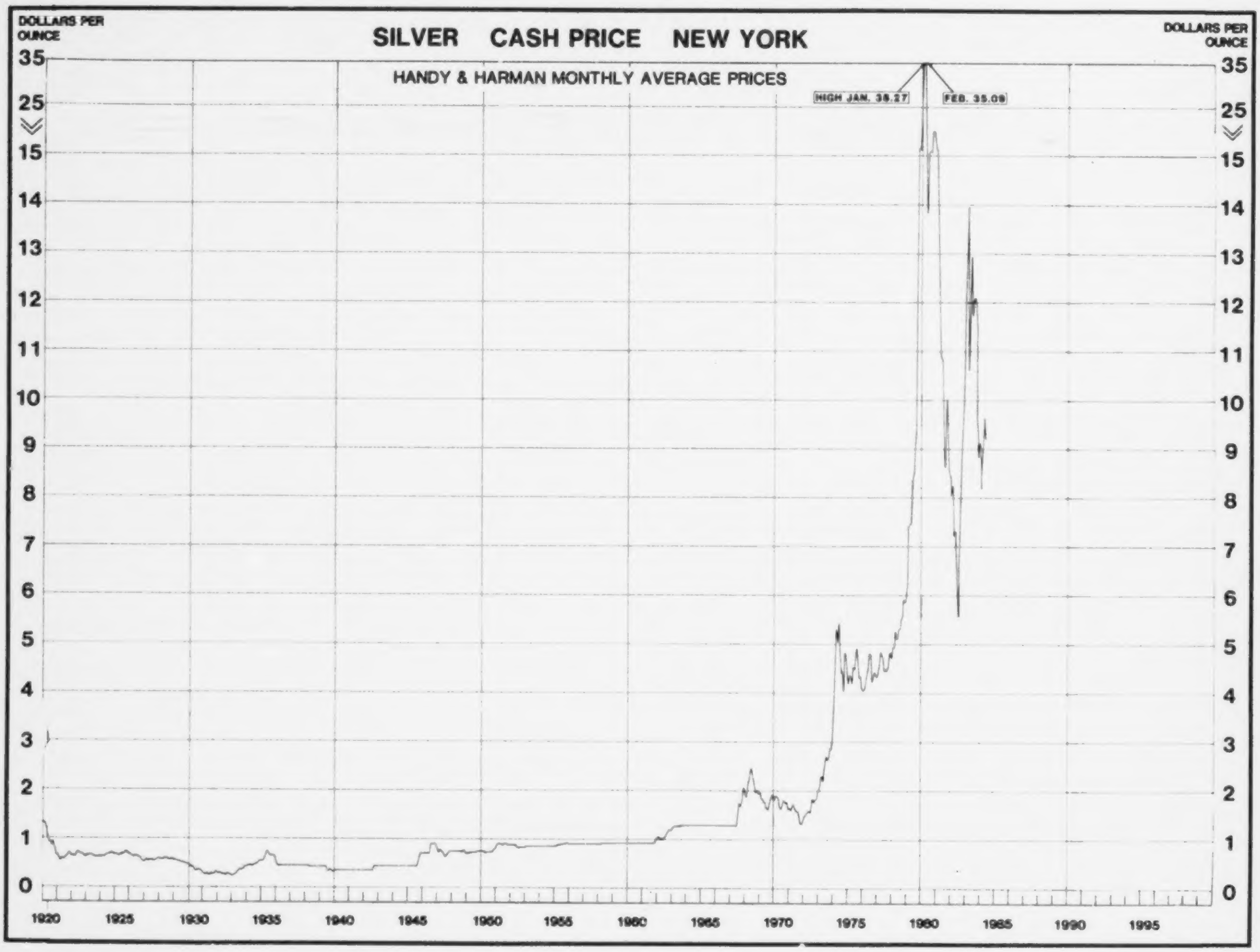
World Production of Silver, by Selected Countries In Millions of Fine Ounces (Troy Ounces)

Year	Poland	Argentina	Australia	Zaire (Congo)	Bolivia[1]	Canada	Morocco	W. Germany	Honduras	USSR[2]	Japan	Mexico	Peru	United States	Yugoslavia	World Total[2]
1971		3.18	21.70	1.47	5.37	46.02	2.94	1.80	3.64	39.0	11.29	36.66	38.40	41.56	3.35	294.7
1972		3.27	21.89	2.08	5.58	44.79	3.38	1.74	3.60	40.0	10.05	37.48	40.19	37.23	3.58	301.5
1973		2.44	22.42	2.00	5.80	47.49	3.38	1.45	3.15	41.0	8.55	38.79	42.02	37.83	4.30	307.9
1974	5.8	3.10	21.54	1.65	5.39	42.81	3.06	1.24	3.66	42.0	7.31	37.55	34.89	33.76	4.70	292.2
1975	13.2	2.28	23.35	2.29	5.47	39.70	3.04	1.08	3.80	43.0	8.73	38.03	37.53	34.94	5.41	303.0
1976	17.8	2.25	25.03	2.47	5.34	41.20	2.05	1.03	3.18	44.0	9.30	42.64	35.58	34.33	4.63	316.4
1977	20.7	2.45	27.53	2.73	5.81	42.24	2.82	1.06	2.82	45.0	9.60	47.03	39.73	38.17	4.68	331.3
1978	21.9	2.16	26.12	4.39	6.29	40.73	3.13	.80	2.79	46.0	9.66	50.78	37.02	39.39	5.13	345.0
1979	22.6	2.21	26.76	3.89	5.74	36.87	3.28	1.04	2.43	46.0	8.68	49.41	39.25	37.90	5.21	343.8
1980	24.6	2.31	25.38	2.73	6.10	33.34	3.15	1.04	1.77	46.0	8.60	47.34	42.99	32.33	4.79	339.4
1981[3]	20.58	2.51	23.90	3.00	6.39	36.30	2.50	1.26	1.82	46.5	9.01	53.20	46.94	40.68	4.44	362.3
1982[2]	21.06	2.20	29.20	3.00	5.47	38.71	3.00	1.20	2.20	46.9	9.83	49.84	53.64	40.24	3.34	372.5
1983[2]						43.0				47.0		55.0	54.0	42.0		390.0

[1] Exports. [2] Estimate. [3] Preliminary. *Source: Bureau of Mines*

T.594

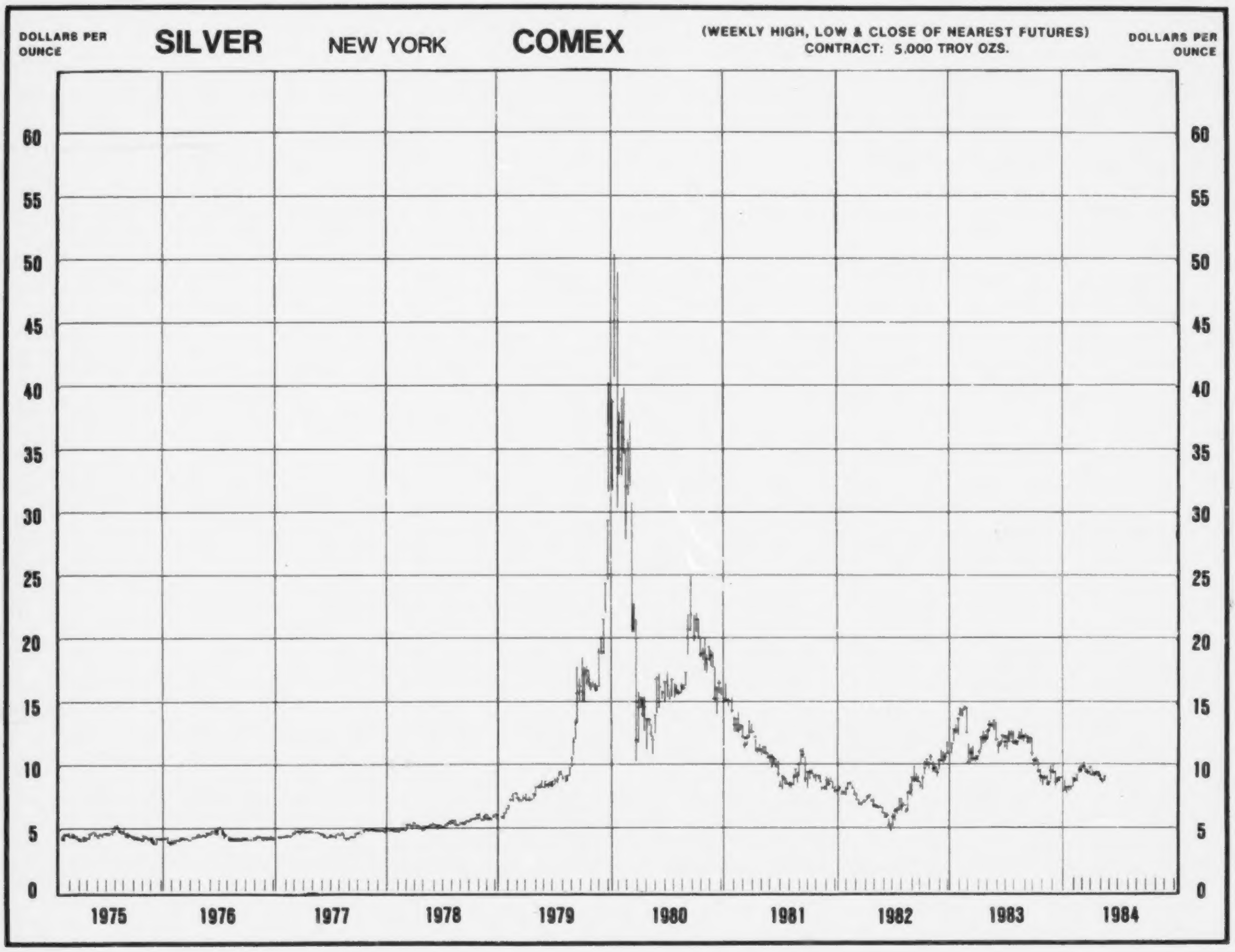
SILVER



Average Price of Silver in New York In Cents per Troy Ounce (.999 Fine)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	164.0	160.0	166.9	172.6	166.7	160.8	158.1	158.7	142.1	133.6	132.0	139.4	154.6
1972	147.3	150.4	153.6	157.2	158.3	156.9	173.6	184.6	177.7	181.1	183.3	197.6	168.5
1973	201.7	223.6	230.9	220.7	240.1	262.1	270.6	263.7	267.5	288.6	286.0	313.7	256.0
1974	363.7	535.9	532.6	503.6	543.2	489.6	441.6	443.1	404.9	483.0	469.4	439.1	470.8
1975	419.3	437.0	434.5	420.9	453.8	448.9	470.5	492.5	451.6	432.9	433.2	408.5	442.0
1976	406.3	408.6	418.9	435.1	448.9	481.2	478.0	423.7	429.5	422.5	437.3	434.7	435.4
1977	440.9	452.7	484.2	477.7	469.2	444.3	449.8	444.4	453.9	476.3	482.8	470.6	462.3
1978	493.4	493.6	526.8	511.6	512.0	531.6	533.1	549.5	557.5	591.8	586.5	593.0	540.0
1979	625.5	741.7	745.4	749.3	836.6	853.8	913.5	933.4	1,395.9	1,678.1	1,655.3	2,179.3	1,109.0
1980	3,827.2	3,508.5	2,413.3	1,384.1	1,253.3	1,574.8	1,606.0	1,589.7	2,014.4	2,018.1	1,864.8	1,639.3	2,063.3
1981	1,475.2	1,306.5	1,236.9	1,091.7	1,084.8	1,000.1	863.1	892.3	1,003.6	925.1	854.7	843.2	1,048.1
1982	803.1	826.8	721.3	731.1	667.4	557.8	649.7	713.6	872.5	948.8	991.8	1,058.6	795.0
1983	1,239.6	1,396.4	1,061.9	1,169.4	1,295.3	1,174.9	1,208.8	1,209.6	1,191.5	984.1	883.7	912.1	1,143.9
1984	818.2	912.7	965.1	922.1									

Source: Handy & Harman T.595



World[2] Silver Consumption In Millions of Troy Ounces

	Industrial Uses									Coinage							
Year	Canada	France	W. Germany	India	Italy	Japan	Un. Kingdom	United States	World Total	Canada	France	W. Germany	Austria	Mexico	United States	World Total	World Total
1971	6.0	15.6	59.9	16.0	30.5	46.5	25.0	129.1	351.4	.2	.4	19.2	3.2		2.5	28.3	379.7
1972	7.4	16.5	60.0	13.0	32.0	54.3	27.0	151.7	388.9	.1	.3	22.6	5.8		2.3	38.4	427.3
1973	8.6	14.3	64.7	13.0	41.5	69.0	31.0	195.9	477.8	1.4	.1	9.5	6.6		.9	29.2	507.0
1974	9.6	15.5	59.9	15.0	38.6	46.5	25.0	177.0	409.4	8.9	.1	8.8	5.6		1.0	27.9	436.9
1975	10.6	21.2	38.9	13.0	28.9	46.4	28.0	157.7	376.8	10.4	5.2	4.3	13.4	—	2.7	38.8	415.6
1976	9.5	19.0	50.8	18.0	32.1	60.7	28.0	170.5	437.5	8.4	6.7	2.9	6.9	—	1.3	29.7	467.2
1977	8.8	20.6	59.5	17.6	33.8	63.2	32.2	153.6	433.6	.3	6.9	2.6	3.0	4.2	.4	23.4	457.0
1978	9.0	22.2	47.2	20.0	41.8	64.8	29.0	160.2	442.6	.3	11.1	3.6	4.5	6.3	.1	36.3	478.9
1979	8.1	21.5	46.1	19.0	31.1	66.4	26.5	157.2	434.2	.3	7.7	3.7	5.0	5.0	.1	27.8	462.0
1980	8.7	20.2	29.1	19.0	21.8	61.7	20.5	124.7	454.5	.2	—	—	4.3	6.1	.1	13.7	368.2
1981	8.5	20.6	28.0	19.0	12.4	59.8	18.5	116.6	336.8	.2	—	—	3.0	—	—	9.0	345.8
1982	9.0	18.6	33.6	22.5	9.3	63.2	20.0	118.8	348.7	.3	—	—	4.0	—	2.5	12.8	361.5
1983[1]	9.0	18.6	25.7	21.8	11.0	69.5	18.0	120.0	348.0	.4	—	—	2.0	—	11.2	18.6	366.6

[1] Preliminary. [2] Non-communist areas only. *Source: Handy & Harman*

T.597

SILVER

U.S. Mine Production of Recoverable Silver In Thousands of Troy Ounces

Year	Arizona	California	Colorado	Idaho	Michigan	Missouri	Montana	Nevada	New Mexico	New York	Tennessee	So. Dakota	Utah	Other States	Total
1975	6,286	80	3,366	13,868	632	2,525	2,617	1,609	792	56	54	68	2,822	164	34,938
1976	7,615	57	4,083	11,561	311	2,277	3,279	784	892	49	78	58	3,134	146	34,328
1977	6,828	58	4,663	15,292	335	2,363	3,367	738	918	56	60	69	3,283	125	38,166
1978	6,638	58	4,217	18,379	N.A.	2,056	2,918	804	895	21	N.A.	N.A.	2,885	457	39,385
1979	7,479	64	2,809	17,144	N.A.	2,201	3,302	560	N.A.	11	N.A.	N.A.	2,454	1,812	37,896
1980	6,268	49	2,987	13,695	N.A.	2,357	2,024	940	N.A.	21	N.A.	N.A.	2,203	1,725	32,329
1981	8,055	53	3,009	16,546	N.A.	1,837	2,989	3,039	1,632	29	N.A.	N.A.	2,883	480	40,683
1982[1]	6,301	34	1,934	14,830	N.A.	2,241	6,169	3,142	805	27	N.A.	N.A.	4,343	413	40,239
1983[2]	4,510		1,817	17,687		2,068	5,693	1,721				62	4,115	2,604	40,277

[1] Preliminary. [2] Forecast. *Source: Bureau of Mines*

T.599

U.S. Consumption of Silver, by End Use In Thousands of Troy Ounces

Year	Bearings	Brazing Alloys & Solders	Catalysts	Dental & Medical	Electroplated Ware	Electrical & Electronic Products		Jewelry	Mirrors	Photographic Materials	Sterling Ware	Coins, Medallions[2]	Total Net Industrial Consumption	Coinage	Total Consumption
						Batteries	Contacts & Conductors								
1975	458	13,582	8,785	1,503	8,717	4,253	27,211	12,734	3,150	46,074	23,717	7,186	157,650	2,740	160,390
1976	273	11,198	12,267	1,942	9,534	3,490	32,329	10,995	4,622	55,350	19,815	8,240	170,559	1,315	171,874
1977	523	12,362	8,883	2,232	6,844	5,783	31,316	8,059	2,131	53,679	16,690	4,252	153,613	91	153,704
1978	373	10,987	8,197	2,033	7,274	6,029	30,756	6,766	1,862	64,299	17,908	2,727	160,165	45	160,210
1979	332	10,912	5,637	2,295	8,065	4,583	33,506	5,358	1,850	65,978	13,088	4,676	157,258	168	157,426
1980	649	8,508	3,035	2,212	4,350	5,976	27,796	5,893	672	49,825	9,082	4,693	124,694	72	124,766
1981	297	7,718	3,830	1,709	3,904	3,803	26,411	5,368	581	51,025	4,407	2,622	116,670	179	116,849
1982[1]	228	7,384	2,417	1,688	3,254	4,167	27,730	6,260	970	51,769	6,579	1,832	118,840	1,846	120,686
1983[3]	172	6,695	2,413	1,529	3,141	2,637	26,272	6,861	968	51,821	7,022	2,979	117,077	2,128	119,204

[1] Preliminary. [2] Includes commemorative objects. [3] Estimate. *Source: Bureau of Mines*

T.598

Commodity Exchange, Inc. (COMEX) Warehouse Stocks of Silver In Millions of Ounces

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1975	68.0	69.5	72.6	70.5	73.7	77.2	78.3	80.9	80.2	82.7	82.4	81.7
1976	86.3	84.1	82.8	79.3	77.3	71.8	65.3	58.0	54.6	50.0	49.3	52.3
1977	54.8	56.5	57.2	63.3	65.6	67.0	69.4	70.6	65.2	64.9	60.2	64.5
1978	68.7	70.0	72.3	74.2	73.4	70.8	72.8	73.6	72.4	66.7	64.3	63.0
1979	58.2	52.0	51.8	49.2	50.3	55.5	54.1	48.9	47.3	51.8	60.3	70.2
1980	74.8	76.0	77.8	83.1	84.2	82.3	82.0	81.7	82.6	82.2	87.1	86.1
1981	86.9	86.8	85.4	84.6	85.7	85.1	86.6	85.4	78.8	78.1	76.0	77.3
1982	77.6	76.3	78.5	77.1	79.9	78.0	72.4	66.2	60.0	60.7	59.2	80.6
1983	91.2	90.9	106.4	96.8	91.3	69.8	91.1	93.7	113.6	129.3	129.4	129.6
1984	127.2	123.7	116.8	117.2	115.3							

Source: Commodity Exchange, Inc.—New York

T.600

United States Production[1] of Refined Silver from All Sources In Thousands of Troy Ounces

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	16,815	14,623	14,619	13,693	12,281	12,267	12,090	12,996	13,222	13,832	12,372	14,251	161,568
1976	9,369	11,558	14,260	14,155	10,952	12,633	8,771	10,342	12,598	13,998	16,018	18,378	154,230
1977	13,196	10,114	13,173	13,335	13,260	14,100	5,781	7,840	10,412	13,643	13,002	14,966	143,125
1978	10,694	12,699	12,503	10,871	12,196	12,000	10,186	12,214	10,727	12,666	11,526	12,721	141,003
1979	10,592	10,888	13,070	11,451	11,938	11,600	12,433	9,837	9,118	12,476	12,221	17,008	155,723
1980	18,088	17,548	17,673	16,941	10,400	14,800	6,676	11,583	10,785	10,603	10,578	14,553	166,326
1981	12,889	12,000	11,352	11,889	10,402	11,500	10,433	10,114	10,533	9,954	8,105	11,589	130,783
1982	9,043	8,407	10,300	8,856	9,095	8,840	7,781	8,518	7,872	8,307	9,607	11,655	108,252
1983	9,121	8,533	9,063	9,653	7,663	10,210	8,579	8,342	7,886	8,738	9,880	12,058	109,700
1984	7,094	8,414											

[1] Output of commercial bars .999 fine, including U.S. Mint purchases of crude. Production is from both foreign and domestic silver. *Sources: American Bureau of Metal Statistics; The Silver Institute, Inc.*

T.603

Highest and Lowest Prices of December Silver Futures at New York (Comex) In Dollars per Ounce

Year of Delivery		Yr. Prior to Delivery			Delivery Year												Life of Delivery Range
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1978	High	5.292	5.377	5.166	5.425	5.43	5.877	5.752	5.668	5.718	5.823	5.863	5.795	6.40	6.11	6.02	6.400
	Low	5.022	5.01	4.95	5.16	5.135	5.25	5.10	5.174	5.392	5.325	5.43	5.506	5.71	5.645	5.80	4.715
	Close	5.251	5.134	5.143	5.33	5.29	5.775	5.219	5.621	5.40	5.817	5.597	5.715	6.215	6.00	5.986	—
1979	High	6.94	6.558	6.538	7.16	8.405	8.23	8.363	9.36	9.235	9.975	10.935	16.90	18.13	19.40	25.75	25.750
	Low	6.296	6.205	6.26	6.36	6.99	7.453	7.625	8.31	8.64	8.842	8.985	11.15	15.91	15.85	18.65	5.585
	Close	6.758	6.465	6.514	7.089	8.14	7.839	8.363	9.091	8.96	9.293	10.86	16.80	16.79	18.82	25.50	—
1980	High	19.55	20.528	30.91	44.37	42.15	39.78	20.27	14.75	20.20	20.09	17.14	24.18	22.28	20.32	19.02	44.370
	Low	16.79	17.54	20.705	31.91	35.20	21.27	13.86	11.45	16.975	17.57	15.90	16.67	18.54	17.58	13.37	7.564
	Close	18.395	20.528	30.91	37.645	38.64	21.27	13.86	14.53	19.24	17.84	16.84	21.25	19.10	18.59	16.61	—
1981	High	26.00	23.525	22.615	18.80	15.90	14.67	13.58	12.70	11.84	9.78	10.26	11.80	10.05	9.41	9.05	43.750
	Low	22.12	20.875	17.19	14.60	13.75	12.80	11.90	11.21	9.08	8.77	8.73	8.49	9.00	7.87	7.98	7.970
	Close	22.54	22.015	18.19	15.165	13.72	13.135	12.205	11.685	9.18	9.032	9.72	9.38	9.25	8.205	7.985	—
1982	High	11.45	10.70	10.15	9.49	9.86	8.82	8.39	7.54	6.68	7.72	8.66	9.975	10.07	11.01	11.18	17.975
	Low	10.509	9.11	9.04	8.73	8.65	7.60	7.35	6.67	5.11	5.80	6.32	7.70	8.02	8.95	10.02	5.11
	Close	10.68	9.28	9.185	9.182	8.622	7.87	7.47	6.675	6.406	6.965	8.04	8.24	10.09	10.09	11.14	—
1983	High	11.55	11.90	12.35	15.238	16.07	12.18	13.38	14.42	13.32	13.11	13.25	12.74	10.78	9.86	10.04	16.07
	Low	9.00	9.90	11.07	11.84	12.666	10.71	11.44	12.68	11.513	11.72	11.75	11.01	8.63	8.32	8.44	6.146
	Close	10.94	11.09	11.91	15.238	12.666	11.382	12.715	13.64	12.055	12.225	12.41	11.07	8.63	9.62	8.81	—
1984	High	11.83	10.86	11.10	9.78	10.73	10.97	10.49									
	Low	9.596	9.22	9.40	8.47	9.29	9.93	9.465									
	Close	9.596	10.649	9.867	9.329	10.42	10.541	9.555									

Source: Commodity Exchange Inc., of N.Y. (COMEX) T.596

Month–End Total Open Interest of Silver Futures at New York (COMEX) & Chicago In Thousands of Contracts

Year	At New York (COMEX)												At Chicago (1,000 oz.[1])			
	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Apr. 1	July 1	Oct. 1
1975	123.9	95.2	84.5	88.4	74.7	85.6	84.6	88.9	118.1	140.5	176.5	214.5	118.1	62.2	99.6	124.2
1976	250.3	197.6	176.4	176.7	169.0	168.1	138.4	130.7	138.1	155.7	208.6	287.2	169.8	88.4	121.6	127.5
1977	398.1	338.0	309.5	282.2	234.6	205.8	156.1	130.1	135.6	181.7	211.3	241.7	186.0	156.8	183.5	211.6
1978	287.8	245.4	242.4	226.0	217.8	208.6	196.2	212.6	214.4	239.1	277.5	304.8	275.9	240.2	230.0	235.4
1979	299.5	242.9	218.7	203.5	185.7	170.0	153.3	154.5	156.2	167.3	144.3	133.4	252.8	180.5	166.6	156.7
1980	123.6	77.7	63.4	48.5	27.1	23.8	22.9	25.1	24.5	29.8	35.0	36.0	88.9	23.6	22.9	24.0
1981	32.0	27.6	24.3	25.7	26.1	28.8	29.4	31.0	31.0	29.9	32.3	27.5	28.0	21.2	29.8	16.3
1982	27.6	27.5	25.0	29.3	28.3	27.0	27.3	29.0	27.2	24.6	30.0	31.0	7.1	8.6	7.0	12.5
1983	33.9	44.6	54.3	45.9	50.1	57.1	42.8	42.7	48.1	53.0	51.7	55.4	19.4	32.6	35.8	35.1
1984	59.9	62.0	64.3	71.6	64.5								32.0	37.8		
1985																

[1] 1,000 oz. Contract from Jan. 1982. Prior data is for 5,000 oz. Contract. *Source: Commodity Exchange of N.Y. (COMEX) & Chicago Board of Trade* T.601

Volume of Trading in Silver Futures at New York (COMEX) In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	330.0	270.7	391.0	287.5	244.9	247.2	254.1	316.2	192.0	469.0	438.0	381.4	3,822
1979	460.0	388.3	304.6	367.3	545.3	480.5	383.9	404.1	283.1	191.7	178.6	111.1	4,081
1980	167.7	76.2	143.5	94.0	46.6	63.3	45.6	41.8	100.9	92.9	97.1	90.6	1,059
1981	70.7	71.0	74.9	72.6	58.0	97.4	77.4	116.0	171.9	121.4	136.6	172.8	1,241
1982	112.8	193.9	211.5	192.9	99.7	217.4	263.1	317.2	258.0	288.9	350.6	372.8	2,869
1983	502.7	601.4	446.6	452.9	516.1	623.7	454.3	656.5	492.0	569.0	598.9	512.7	6,433
1984	560.8	698.8	695.7	629.9									
1985													

Source: Commodity Exchange of N.Y. (COMEX) T.602

Soybean Meal

Soybean meal is by far the most important protein meal produced worldwide. In recent years it has accounted for 62 to 66 percent of world production of major protein meals, and was expected to represent a slightly lower 61 percent (57.5 million tonnes) of the estimated 94.1 million tonne 1983/84 world output. In early May 1984, the USDA estimated world production of soybean meal at 57.5 million tonnes, nearly 7 percent less than in the 1982/83 season. World domestic consumption was estimated at 57.8 million tonnes, about 5 percent lower than in the 1982/83 season, partly reflecting poor demand for livestock products and increased consumption of alternative protein sources. World exports of soybean meal in 1983/84 were projected by the USDA at 21.05 million tonnes, 8 percent below estimated 1982/83 exports of 22.92 million tonnes. World 1983/84 ending stocks were projected at 1.98 million tonnes versus 2.43 million a year earlier.

The U.S. has accounted for between 38 and 43 percent of world soybean meal production in recent years, but this share was estimated to have dropped to 36 percent (20.9 million tonnes) in 1983/84. Brazil accounted for 14 to 19 percent of world production in the 1979/80–1982/83 period, and was expected to have produced 17 percent (9.55 million tonnes) of the world total in 1983/84.

The U.S. usually accounts for 27 to 30 percent of world consumption of soybean meal, a slightly larger percentage than the European Community (EC-10). Eastern Europe accounts for about 7 percent of world soybean meal use. The USDA, in April 1984, projected 1983/84 U.S. domestic use of soybean meal at 27 percent (15.8 million tonnes) of world use; EC-10 use—25 percent (14.6 million tonnes); and Eastern Europe—7 percent (about 4 million tonnes).

Brazil is now the world's largest exporter of soybean meal, accounting for between 37 and 43 percent of the total in recent years, and an estimated 38 percent (8.1 million tonnes) in 1983/84. The U.S. share of total world exports has ranged between 28 and 42 percent, and was estimated by the USDA to drop to 24 percent (5.2 million tonnes) in 1983/84. The EC-10 is by far a net importer of soybean meal, but it has also exported around 6 million tonnes annually in recent seasons.

World ending stocks of soybean meal represent only 3 to 4 percent of world consumption; with Brazil, the U.S. and the EC-10 holding the bulk of stocks.

Soybean meal prices during most of the 1983/84 season were higher than in the previous season, primarily reflecting reduced production. However, price gains were very limited by increasing use of protein sources other than soybean meal; such as rapeseed meal, cottonseed meal, fishmeal and sunflowerseed meal. In addition, demand by the Soviet Union, whose imports had increased at a sharp rate in recent years, was less than anticipated.

Futures Markets

Soybean meal futures are traded on the Chicago Board of Trade, and on the London Commodity Exchange.

Supply and Distribution of Soybean Meal in the United States In Thousands of Short Tons

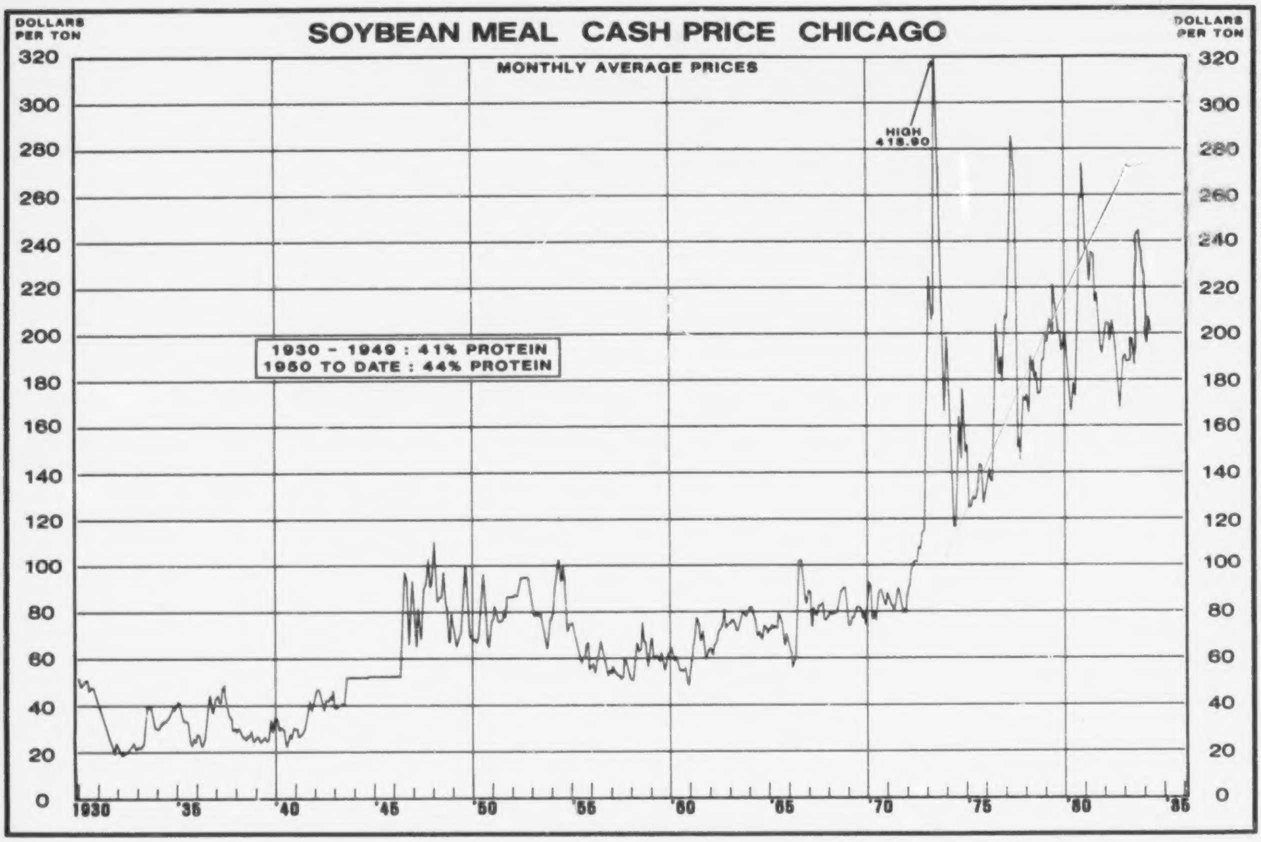
Year Begin. Oct.	Supply					Distribution				Price Per Ton Bulk, Decatur	
	For Stocks Oct. 1	Production Total	Production For Animal Feed	Production For Edible Protein Pdt's.	Total	Domestic Feed[2]	Exports	Shipments to U.S. Terr.	Total	44% Protein	49–50% Protein
1975–6	358	20,754	20,395	359	21,112	15,552	5,145	61	20,758	147.77	157.68
1976–7	355	18,488	18,101	388	18,843	14,001	4,559	55	18,615	199.80	218.73
1977–8	228	22,557	21,405	410	22,785	16,462	6,080	61	22,542	163.56	179.45
1978–9	243	24,354	23,205	368	24,597	17,720	6,610	47	24,330	190.06	206.30
1979–0	267	27,105	25,930	297	27,372	19,214	7,932	60	27,146	181.91	195.55
1980–1	226	24,312	23,232	286	24,538	17,591	6,784	—	24,375	218.18	235.13
1981–2	163	24,634	23,500	308	24,797	17,714	6,908	—	24,622	182.52	196.63
1982–3[1]	175	26,714			26,889	19,306	7,109	—	26,415	187.19	
1983–4[3]	474	23,471			23,945	17,600	6,000	—	23,600	215.00	
1984–5[3]	345										

[1] Preliminary. [2] Includes small quantities used for industrial purposes, estimated at 30,000 tons annually. [3] Estimate. *Source: Economic Research Service, U.S.D.A.* T.606

U.S. Exports of Soybean Cake & Meal by Country of Destination In Thousands of Metric Tons

Yr. Beg. Oct. 1	Belg.-Lux.	Japan	Canada	Denmark	France	W. Germany	Spain	Ireland	Italy	Netherlands	Philippines	Poland	United Kingdom	Yugoslavia	Grand Total
1975–6	238.2	120.1	277.8	35.1	761.9	1,008	347.3	49.1	421.4	102.5	.1	360.8	54.5	183.5	4,667
1976–7	83.4	217.5	256.4	36.8	131.0	953.1	143.3	36.1	428.8	565.8	—	256.9	46.7	95.2	4,117
1977–8	37.0	271.3	339.5	26.1	146.6	1,004	237.3	83.6	741.6	654.7	21.0	493.3	65.0	113.1	5,515
1978–9	3.8	204.5	416.0	65.6	355.1	717.6	253.5	117.9	691.1	748.1	—	243.0	66.8	57.9	5,998
1979–0	13.3	210.0	355.9	48.5	270.2	1,013	58.0	74.1	855.7	1,490	41.1	400.0	69.0	152.9	7,196
1980–1	48.9	153.7	331.2	.1	8.0	710.3	21.6	.5	684.3	1,502	0	312.3	56.9	191.4	6,154
1981–2[1]	13.7	51.7	339.6	0	62.6	630.9	82.3	15.8	947.3	2,201	69.7	0	106.9	84.7	6,266
1982–3															

[1] Preliminary. *Source: The Bureau of the Census, U.S.D. of Commerce* T.607



High, Low & Closing Prices of May Soybean Meal Futures on the Chicago Board of Trade $ per Ton

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	207.0	209.0	207.5	216.5	181.9	161.5	161.8	162.3	181.0	170.5	169.2	158.5	194.5	186.0	182.3	216.5
	Low	188.5	185.0	190.0	183.0	158.0	143.6	143.5	147.5	161.0	158.6	153.2	152.1	155.0	169.1	172.3	143.5
	Close	196.0	195.0	203.5	189.0	158.0	147.8	151.3	162.1	163.1	166.7	153.6	154.1	178.7	176.0	179.0	—
1979	High	—	180.0	182.0	181.0	172.0	178.5	183.0	202.0	197.0	193.9	195.5	209.5	205.5	202.7	194.0	209.5
	Low	—	168.0	167.0	168.0	165.0	165.1	172.5	179.0	179.7	184.0	184.5	190.5	193.7	186.5	185.8	165.0
	Close	—	169.0	181.2	173.2	167.7	175.8	178.5	197.0	187.0	188.3	192.2	203.2	202.2	186.9	188.9	—
1980	High	—	201.0	204.0	233.0	221.0	205.5	211.3	213.0	204.5	201.2	197.5	193.0	182.0	169.0	173.0	233.0
	Low	—	195.7	197.5	202.0	196.0	194.5	197.5	188.5	189.3	189.6	179.9	179.0	160.7	158.1	163.3	158.1
	Close	—	200.0	203.7	202.5	198.7	203.0	207.0	192.7	199.9	189.7	190.3	179.4	161.4	163.9	168.0	—
1981	High	206.5	200.5	201.0	205.0	238.0	242.5	265.0	299.0	300.5	294.8	259.5	232.5	224.0	231.7	230.2	300.5
	Low	193.0	191.0	191.5	190.3	205.0	217.0	241.0	244.3	275.0	220.7	213.7	214.5	205.2	216.9	214.0	190.3
	Close	195.2	195.5	192.0	205.0	229.6	242.5	251.7	290.2	292.7	249.0	220.7	215.2	220.8	226.9	214.0	—
1982	High	—	261.5	252.0	242.0	241.0	230.0	218.0	210.5	206.5	203.5	197.0	197.7	188.5	196.0	196.5	261.5
	Low	—	248.5	234.5	221.0	223.0	207.0	203.5	201.8	194.1	181.5	187.8	182.7	178.4	186.2	188.0	181.5
	Close	—	249.5	239.0	225.0	231.5	209.0	206.5	203.5	197.3	188.3	195.9	186.1	187.7	190.9	189.0	—
1983	High	—	215.0	210.0	205.5	199.0	195.5	176.0	169.0	180.5	178.5	186.0	186.1	192.8	193.3	190.3	215.0
	Low	—	203.0	201.5	197.0	189.5	171.0	165.3	160.3	166.5	171.3	174.1	170.6	172.5	183.3	176.1	160.3
	Close	—	209.5	201.5	197.7	192.0	174.0	166.5	166.0	178.0	175.2	185.6	171.4	189.7	189.4	181.3	—
1984	High	219.5	217.5	213.0	198.0	229.0	267.5	261.0	246.0	249.6	229.5	221.5	201.5	210.0	205.4		
	Low	213.5	207.5	194.2	185.0	194.0	218.8	229.0	229.5	220.0	212.2	193.2	188.9	200.5	182.5		
	Close	215.2	211.5	194.2	195.0	216.2	244.0	240.0	232.0	226.7	225.0	197.4	200.7	202.9	183.8		
1985	High	206.9	206.5														
	Low	198.5	187.0														
	Close	205.0	187.8														

Source: Chicago Board of Trade

T.612

SOYBEAN MEAL

Average Price of Soybean Meal (44% Protein) at Chicago In Dollars per Ton (Bagged)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	85.60	82.60	82.40	80.25	84.25	87.50	90.25	84.75	79.25	80.75	79.80	86.60	83.67
1972	88.60	91.00	97.00	100.60	101.40	101.20	107.50	107.10	113.90	114.90	129.40	180.60	111.09
1973	195.00	225.30	206.50	209.80	321.20	418.90	317.80	291.60	214.70	166.20	173.80	198.80	244.97
1974	178.80	166.80	154.20	124.30	116.30	107.10	145.80	164.00	146.00	176.00	148.80	151.20	148.28
1975	137.00	125.00	125.60	129.90	128.30	129.20	132.30	143.40	143.00	135.30	126.90	134.60	132.54
1976	137.75	141.75	137.50	136.60	162.10	198.10	204.10	183.50	189.60	179.80	191.40	207.80	172.42
1977	217.20	221.20	236.40	285.80	268.40	235.50	172.50	150.90	154.25	145.40	172.30	170.70	202.55
1978	173.10	164.00	190.50	184.10	188.50	180.80	183.10	174.10	175.40	188.40	188.70	200.40	182.59
1979	196.50	202.40	306.20	202.80	199.70	221.40	213.60	201.00	200.70	193.50	195.20	200.10	202.76
1980	192.40	186.50	176.90	166.60	178.90	173.40	200.40	220.10	247.20	259.10	274.10	236.40	209.33
1981	236.20	225.30	223.40	235.10	234.10	214.20	217.40	215.50	203.30	194.25	191.75	201.00	215.96
1982	204.50	204.50	197.10	203.75	205.90	197.10	195.40	182.40	172.40	168.00	184.30	189.50	192.07
1983	190.75	188.10	188.30	197.75	196.75	186.50	200.30	243.80	244.60	238.10	235.70	227.60	211.50
1984	212.90	195.40	207.40										
1985													

Source: Consumer Marketing Service, U.S.D.A. T.608

Production of Soybean Cake & Meal in the U.S. In Thousands of Short Tons

Crop Year	Production													Meal in Form of Soybeans[2]
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Total	
1972–3	1,562	1,661	1,618	1,656	1,523	1,507	1,364	1,449	1,226	1,043	1,116	984	16,709	11,208
1973–4	1,465	1,688	1,704	1,757	1,658	1,786	1,647	1,694	1,630	1,704	1,654	1,288	19,674	13,170
1974–5	1,467	1,458	1,427	1,484	1,282	1,436	1,368	1,245	1,256	1,408	1,533	1,338	16,702	10,024
1975–6	1,701	1,697	1,808	1,748	1,617	1,820	1,830	1,891	1,772	1,670	1,556	1,645	20,754	13,316
1976–7	1,747	1,763	1,741	1,725	1,709	1,771	1,596	1,454	1,340	1,211	1,187	1,243	18,488	13,200
1977–8	1,781	2,017	2,044	2,007	1,778	2,050	1,903	1,959	1,725	1,681	1,758	1,695	21,629	16,895
1978–9	2,052	2,069	2,222	2,095	1,892	2,052	1,921	1,999	1,910	1,836	1,759	1,766	23,573	17,681
1979–0	2,214	2,359	2,431	2,477	2,319	2,379	2,129	2,167	1,922	1,990	1,945	1,896	26,227	21,118
1980–1	2,253	2,291	2,179	2,133	1,838	2,074	1,976	1,896	1,709	1,681	1,726	1,763	23,518	
1981–2	2,502	2,326	2,451	2,266	2,077	2,050	1,931	2,066	1,844	1,684	1,620	1,819	24,634	
1982–3[1]	2,386	2,581	2,679	2,628	2,221	2,259	1,950	1,993	1,956	1,934	2,053	2,075	26,714	
1983–4[1]	2,291	2,052	2,125	2,223	1,876	2,033								

[1] Preliminary. [2] Calculated at 47.5 lbs of meal per bushel. *Sources: Economic Research Service, U.S.D.A.; Bureau of Census.* T.609

Month End Open Interest of Soybean Meal Futures at the Chicago Board of Trade In Contracts

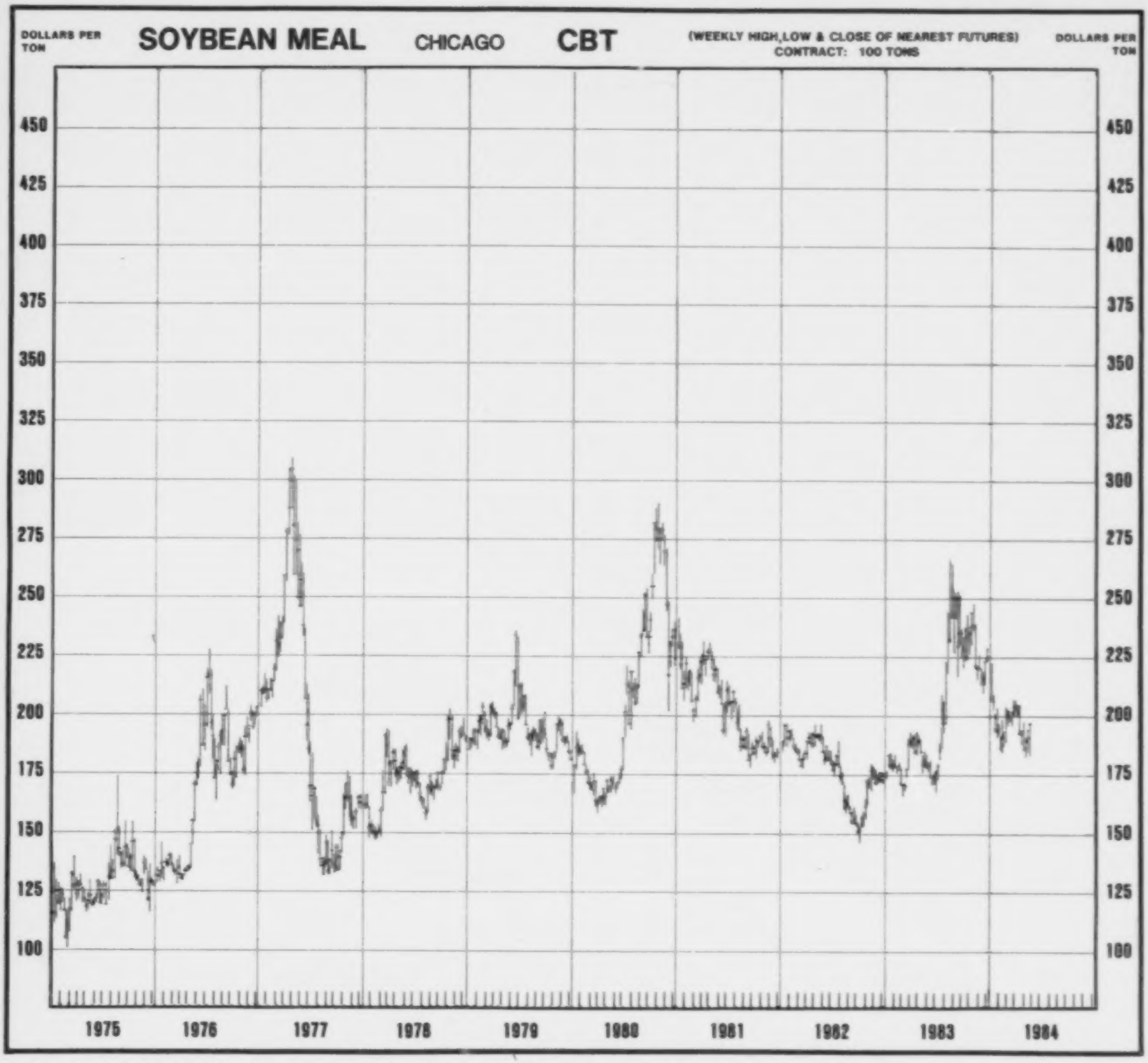
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	30,042	34,991	42,325	40,969	50,633	50,628	52,895	56,288	52,315	60,233	63,302	61,014
1979	48,076	54,316	54,873	48,923	49,678	56,627	47,847	47,804	49,348	56,178	52,426	50,072
1980	49,490	53,379	51,143	47,016	46,603	47,769	50,797	61,261	66,805	82,421	84,051	64,965
1981	53,077	50,584	47,002	51,831	45,160	50,909	45,901	48,379	48,152	47,619	48,140	38,804
1982	41,034	39,700	43,830	45,035	45,481	45,877	47,094	50,823	46,833	44,740	47,300	46,016
1983	50,744	44,808	52,979	46,653	42,893	40,900	50,340	66,826	64,266	64,124	63,461	60,248
1984	55,566	54,875	64,511	58,259								

Source: Chicago Board of Trade T.610

Volume of Trading of Soybean Meal Futures at the Chicago Board of Trade In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	173.1	123.6	275.5	213.6	190.2	224.5	191.3	207.3	162.2	257.3	260.2	214.2	2,493
1979	204.7	244.5	290.3	219.4	211.2	382.2	257.9	182.6	186.3	219.6	183.3	146.8	2,648
1980	172.6	159.2	152.1	183.0	159.1	183.9	370.8	281.5	371.9	413.6	369.3	401.7	3,219
1981	261.9	203.1	220.9	254.3	218.4	294.8	301.8	241.3	276.3	219.0	242.8	304.4	3,040
1982	219.6	238.1	258.6	279.7	197.3	244.0	229.9	225.1	198.8	241.0	233.4	218.9	2,784
1983	269.2	248.0	252.7	272.9	238.6	259.5	320.5	528.2	447.6	349.4	413.1	270.3	3,870
1984	298.8	283.3	299.6	355.5									

Source: Chicago Board of Trade T.611



Stocks (at Oil Mills) of Soybean Cake & Meal in the United States In Thousands of Short Tons

Year	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1
1971–2	145.8	205.2	192.8	144.3	153.9	135.5	160.5	218.0	186.7	189.1	243.2	221.6
1972–3	191.7	185.7	170.7	217.9	193.3	210.0	206.3	213.5	203.4	204.5	214.4	212.8
1973–4	183.2	234.3	242.2	284.6	249.0	281.1	361.6	348.0	427.9	514.3	475.9	535.4
1974–5	507.3	508.2	563.7	529.0	541.0	540.0	556.7	470.5	448.1	421.7	394.8	404.5
1975–6	358.3	396.1	441.4	371.4	378.1	419.5	358.3	358.8	462.8	369.8	406.9	350.5
1976–7	354.9	423.5	427.7	353.9	384.7	429.9	412.6	449.0	408.3	390.7	399.0	270.4
1977–8	228.3	270.0	239.8	245.1	251.7	239.7	227.3	308.2	263.3	191.1	262.6	234.1
1978–9	242.9	210.4	178.2	260.5	215.1	198.4	210.4	231.6	207.4	205.3	232.2	140.3
1979–0	224.3	204.1	164.2	207.7	158.7	160.6	219.1	193.9	265.0	262.0	232.4	225.1
1980–1	189.7	211.1	350.0	221.8	209.7	214.4	232.2	184.4	254.0	209.7	156.1	199.7
1981–2	233.8	309.2	314.8	279.4	315.7	324.9	190.3	172.1	309.3	224.9	209.1	189.7
1982–3[1]	175.2	342.8	349.6	332.3	400.2	442.8	341.0	356.1	341.5	272.3	365.2	378.5
1983–4[1]	474.1	419.3	466.8	391.1	475.8	446.7	465.3					

[1] Preliminary. *Sources: Economic Research Service, U.S.D.A.; Bureau of the Census* T.613

Soybean Oil

Soybean oil dominates world edible oil production, accounting for an estimated 30 percent of 1983/84 output, slightly less than the 32 percent share in 1982/83. The USDA in early May 1984 estimated 1983/84 world production of soybean oil at 13.01 million metric tons, nearly 6 percent below estimated 1982/83 output of 13.78 million tonnes. World domestic consumption of soybean oil was estimated at 13.37 million tonnes versus 13.62 million in 1982/83, and exports were expected to total 3.36 million tonnes versus 3.73 million in 1982/83—continuing to trail palm oil exports by a narrow margin. World stocks of soybean oil at the end of the 1983/84 season were projected at 1.11 million tonnes compared with 1.47 million at the end of the previous season.

The U.S. is the world's largest producer of soybean oil, accounting for 38 to 43 percent of the world total in recent years, and an estimated 38 percent (4.86 million tonnes) in 1983/84. Brazil is the second largest producer, accounting for 16 to 20 percent of world production in the 1979/80–1982/83 period, and an estimated 18 percent (2.32 million tonnes) in 1983/84. Argentina is the other major producer, accounting for 14 to 16 percent of world production in recent years, and an estimated 13 percent (1.69 million tonnes) in 1983/84.

In addition to being the world's largest producer of soybean oil, the U.S. is by far the world's largest single consumer, accounting for about 33 percent of world consumption compared with 11 percent for Brazil—the next largest user. No other single country has exceeded the 5–6 percent accounted for by Japan, and India (which is the world's largest importer of edible oils).

World exports of soybean oil are dominated by the U.S. and Brazil, with the leader in any one season determined primarily by soybean crop size. Exports of soybean oil by Brazil in 1983/84 were expected to account for 26 percent (875,000 tonnes) of the world total versus 22 percent (748,000 tonnes) for the U.S. Spain was expected to account for 11 percent (390,000 tonnes) of projected 1983/84 world exports, about the same share as in recent years, as that country exports oil in excess of the permitted share of the domestic market.

World ending stocks of major edible oils in 1983/84 (aggregated, using individual marketing years) were expected to drop to as low as 7.5 percent (3.25 million tonnes) of estimated consumption from 9.3 percent a year earlier—and the lowest stocks/consumption ratio in a decade. Ending stocks of soybean oil were projected at about 8 percent (1.11 million tonnes) of the estimated world consumption of 13.37 million tonnes.

Soybean oil prices soared to the highest levels in more than a decade in the 1983/84 season. Initial price strength was sparked by the drought-reduced 1983 U.S. soybean crop. Drought and seasonally-reduced palm oil and coconut oil production pushed their prices to extremely large premiums over soybean oil—which helped both the demand for and prices of soybean oil.

Futures Markets

Soybean oil futures are traded on the Chicago Board of Trade, and on the London Commodity Exchange.

U.S. Exports of Soybean Oil,[1] by Country of Destination In Thousands of Metric Tons

Yr. Beg. Oct. 1	Australia	Colombia	Canada	Chile	Ecuador	France	Haiti	Peru	India	Israel	Mexico	Morocco	Pakistan	Panama	Egypt	Grand Total
1975–6	13.1	14.2	31.8	1.0	19.5	—	14.3	14.5	15.8	9.9	3.1	4.9	150.8	13.2	.5	443
1976–7	20.1	27.3	26.0	12.0	16.2	—	17.2	57.3	252.2	3.1	15.4	3.0	119.2	12.5	1.4	702
1977–8	21.0	44.1	27.7	22.0	26.0	5.0	13.8	68.6	247.7	6.3	29.6	5.0	95.8	8.3	6.1	933
1978–9	16.2	84.1	20.9	22.8	22.4	3.6	17.2	29.4	181.1	9.8	5.1	6.0	163.3	19.0	13.9	1,059
1979–0	16.4	82.6	14.8	13.2	35.3	2.9	22.8	36.2	427.7	9.6	31.4	2.3	147.4	17.9	6.0	1,220
1980–1	16.5	60.3	7.8	22.8	38.6	0	22.4	41.2	61.8	5.2	21.6	5.0	125.7	14.7	3.4	739
1981–2	22.6	77.4	5.4	1.7	36.2	0	8.8	46.8	68.4	.3	91.1	9.7	259.9	21.7	6.9	942
1982–3[2]	5.0	69.5	7.5	—	50.4	—	20.4	70.2	54.9	.4	16.3	9.0	236.7	16.4	3.5	918

[1] Crude & refined oil combined as such. [2] Preliminary. *Source: The Bureau of the Census, U.S.D. of Commerce.* T.615

Production, Consumption, Stocks and Foreign Trade of Soybean Oil in the U.S. In Millions of Pounds

Year	Production		Consumption		Stocks December 31		Imports for Consumption	Exports	
	Crude	Refined	In Refining	In End Pdt's.	Crude	Refined		Crude	Refined
1975	7,861	6,423	6,686	6,830	495.3	304.6	—	758	
1976	9,640	7,185	7,476	7,577	1,141	347.1	—	901.7	77.3
1977	8,836	7,790	8,092	7,451	524.0	340.0	.2	1,427.3	81.3
1978	10,625	8,618	8,955	8,175	623.1	347.5	—	1,560.8	77.8
1979	11,504	9,110	9,456	8,656	656.6	373.5	—	2,489	
1980	12,097	8,982	9,300	8,585	1,369.6	368.2	—	2,417	
1981[1]	11,301	9,461	9,817	9,024	1,680.2	343.6	—	1,805	
1982[1]	11,183	9,671	10,042	9,307	1,241.1	345.6	—	2,057	
1983[1]	11,653	9,590	9,939	9,418	1,559.3	360.0			

[1] Preliminary. *Source: Bureau of Census* T.614

Supply & Distribution of Soybean Oil in the U.S. In Millions of Pounds

				Domestic Disappearance											
					Food					Non-Food					
Year Begin. Oct.	Production	Stocks Oct. 1	Exports & Shipments	Total	Shortening	Margarine	Cooking & Salad Oils	Other Edible	Total Food	Paint & Varnish	Resins & Plastics	Fatty Acids	Other Inedible	Foots & Loss	Total Non-Food
1971–2	7,892	773	1,440	6,440	2,089	1,413	2,469	48	6,009	81	55	6	38	251	431
1972–3	7,501	785	1,086	6,685	2,230	1,491	2,469	39	6,229	81	57	9	40	270	456
1973–4	8,995	516	1,461	7,256	2,321	1,513	2,884	30	6,748	91	77	12	48	280	508
1974–5	7,375	794	1,090	6,518	1,882	1,486	2,680	22	6,070	82	58	16	31	260	448
1975–6	9,630	561	1,035	7,906	2,416	1,691	3,274	24	7,405	94	96	23	25	294	501
1976–7	8,578	1,251	1,607	7,454	2,189	1,568	3,165	25	6,947	85	83	26	36	278	507
1977–8	10,288	771	2,137	8,273	2,279	1,585	3,325	29	7,621	87	79	42	33	308	549
1978–9	11,323	729	2,411	8,942	2,480	1,593	3,825								
1979–0	12,105	776	2,690	8,981	2,680	1,643	4,060								
1980–1	11,270	1,210	1,631	9,113	2,660	1,651	4,041								
1981–2	10,979	1,736	2,077	9,536	2,991	1,723	4,368	51	9,133						
1982–3[1]	12,040	1,103	2,025	9,857	2,944	1,615	4,668	58	9,284						
1983–4[2]	10,879	1,261	1,400	9,800											
1984–5[2]		940													

[1] Preliminary. [2] Forecast. *Source: Economic Research Service, U.S.D.A.*

T.623

U.S. Production of Crude Soybean Oil In Millions of Pounds

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1971–2	645.2	644.2	690.6	689.9	658.9	706.4	646.7	698.8	635.4	648.6	645.7	581.0	7,891
1972–3	713.3	742.4	716.6	723.5	676.8	680.8	618.3	655.8	553.1	470.1	510.5	439.8	7,501
1973–4	676.8	764.9	769.8	797.7	751.5	809.0	750.8	777.8	756.7	788.3	759.0	592.3	8,995
1974–5	672.9	627.5	621.4	651.6	555.9	632.4	600.9	557.6	557.8	623.9	674.5	599.8	7,376
1975–6	783.9	776.7	846.7	807.4	757.6	852.4	846.1	869.8	813.9	788.7	720.5	766.1	9,630
1976–7	807.4	804.0	805.7	786.7	791.2	823.7	747.3	682.4	631.1	566.6	553.6	578.2	8,578
1977–8	821.9	922.3	931.5	911.9	809.5	943.3	866.9	908.2	795.1	777.9	815.8	783.3	10,287
1978–9	984.3	974.8	1,050	989.1	902.3	982.2	939.6	964.7	930.5	899.9	856.7	849.9	11,324
1979–0	1,020	1,068	1,102	1,115	1,065	1,098	993.7	1,010	901.6	927.8	913.8	890.1	12,105
1980–1	1,080	1,078	1,024	1,011	887.8	991.3	954.2	914.9	830.7	815.8	827.2	855.6	11,271
1981–2	1,125	1,018	1,070	995.6	917.7	912.1	866.8	930.2	828.4	765.6	732.0	818.3	10,979
1982–3[1]	1,079	1,145	1,191	1,167	997.0	1,015.4	881.3	908.9	891.3	888.0	930.2	945.3	12,038
1983–4[1]	1,081	957.7	990.9	1,052.5	896.9	973.7							

[1] Preliminary. *Source: Bureau of the Census*

T.618

U.S. Production of Refined Soybean Oil In Millions of Pounds

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1971–2	534.5	504.2	534.1	529.7	527.5	564.2	537.9	562.6	537.0	484.7	557.9	530.3	6,364
1972–3	562.9	565.4	560.7	574.6	522.9	579.4	514.7	542.1	516.6	433.2	544.8	504.6	6,373
1973–4	577.1	601.6	597.3	666.4	596.0	616.1	575.0	581.8	542.4	560.5	583.9	510.8	7,009
1974–5	585.0	511.4	482.1	515.0	468.6	497.1	497.0	467.9	489.6	509.3	550.9	538.3	6,112
1975–6	666.9	617.3	605.0	611.9	558.7	646.5	606.6	624.2	627.1	584.7	607.9	568.1	7,325
1976–7	575.4	596.3	578.0	564.4	578.4	710.9	636.9	651.6	589.3	563.9	661.0	623.8	7,330
1977–8	700.1	764.2	745.0	705.6	653.2	801.4	738.0	732.1	649.9	636.8	725.3	679.9	8,532
1978–9	782.8	747.7	765.7	753.3	681.7	768.9	760.1	835.4	742.8	748.3	762.8	693.0	9,043
1979–0	805.9	797.6	760.3	801.9	760.5	767.7	687.1	712.8	669.0	720.3	760.7	764.5	9,038
1980–1	784.1	760.5	763.1	741.6	706.3	833.9	741.2	754.9	812.9	765.4	813.3	812.1	9,289
1981–2	833.6	840.9	805.2	768.7	767.6	866.4	754.5	817.3	866.3	775.4	811.7	794.0	9,702
1982–3[1]	824.6	827.8	795.1	784.1	727.1	841.8	800.9	843.1	824.0	778.7	837.7	828.8	9,714
1983–4[1]	839.2	724.8	737.1	797.9	813.2	844.7							

[1] Preliminary. *Source: Bureau of the Census*

T.617

Soybean Oil Consumption in End Products in the U.S. In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	595.8	546.3	599.0	529.6	592.5	542.6	471.7	580.8	530.3	621.0	629.2	591.9	6,831
1974	673.7	599.8	644.9	583.4	585.0	571.3	597.0	569.2	524.4	621.8	552.1	516.4	7,039
1975	553.4	521.2	528.2	540.3	527.4	531.3	555.3	562.8	604.8	672.0	609.2	624.4	6,830
1976	658.0	617.6	687.3	623.4	625.9	634.6	626.8	635.1	623.7	621.3	609.1	613.8	7,577
1977	571.5	591.2	694.5	597.1	611.0	553.8	517.9	629.8	621.5	658.6	682.3	721.9	7,451
1978	664.1	648.8	771.7	686.5	662.4	640.5	596.2	699.8	672.5	715.9	709.3	707.5	8,175
1979	695.1	636.2	755.3	682.4	775.0	701.6	711.4	744.8	700.9	781.4	742.2	730.1	8,656
1980	750.7	719.4	762.9	671.6	693.6	683.7	671.2	754.5	737.1	719.1	682.6	738.7	8,585
1981	698.7	680.7	775.1	722.3	728.7	774.0	741.1	755.1	796.4	796.8	783.6	749.3	9,002
1982	740.0	737.7	809.6	715.2	761.0	834.6	775.2	811.9	820.5	799.9	763.1	733.2	9,302
1983[1]	761.6	702.2	827.3	765.9	814.9	830.3	745.1	847.0	894.3	812.7	711.4	705.2	9,418
1984[1]	827.6	821.7	837.5										

[1] Preliminary. *Source: Bureau of the Census* T.624

U.S. Exports of Soybean Oil (Crude & Refined) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	52.7	120.9	132.3	49.3	111.8	90.3	81.5	37.0	45.2	12.9	31.7	108.6	874.3
1974	122.2	120.2	98.3	146.0	96.9	226.6	239.0	84.1	83.2	85.9	111.1	193.0	1,067
1975	129.0	71.6	116.1	57.6	72.9	55.7	65.3	13.1	13.5	43.8	78.9	40.4	758.0
1976	32.6	120.2	89.6	55.5	160.9	74.4	77.6	41.8	151.5	100.8	107.7	75.8	1,088
1977	103.7	92.3	236.4	103.3	209.4	159.9	154.2	72.0	66.0	108.8	185.5	175.3	1,667
1978	113.1	141.8	252.6	218.9	176.4	147.2	165.5	108.8	193.4	96.8	154.8	175.4	1,945
1979	219.1	249.8	199.0	185.6	107.3	299.0	166.2	187.4	159.1	127.8	208.5	261.9	2,371
1980	173.4	250.0	325.4	269.6	327.3	194.6	109.7	175.7	171.2	112.5	84.7	120.5	2,315
1981	116.0	113.8	202.8	76.1	109.6	108.8	93.1	291.7	97.9	187.2	146.6	184.3	1,698
1982[1]	43.9	176.7	126.5	148.5	103.3	208.0	270.2	237.4	244.1	181.1	174.9	142.0	2,057
1983[1]	124.0	225.9	90.4	305.7	127.5	94.1	208.9	125.1	225.1	55.1	54.7		

[1] Preliminary. *Source: Dept. of Commerce* T.619

U.S. Stocks of Soybean Oil (Crude & Refined) at Factory & Warehouses In Millions of Pounds

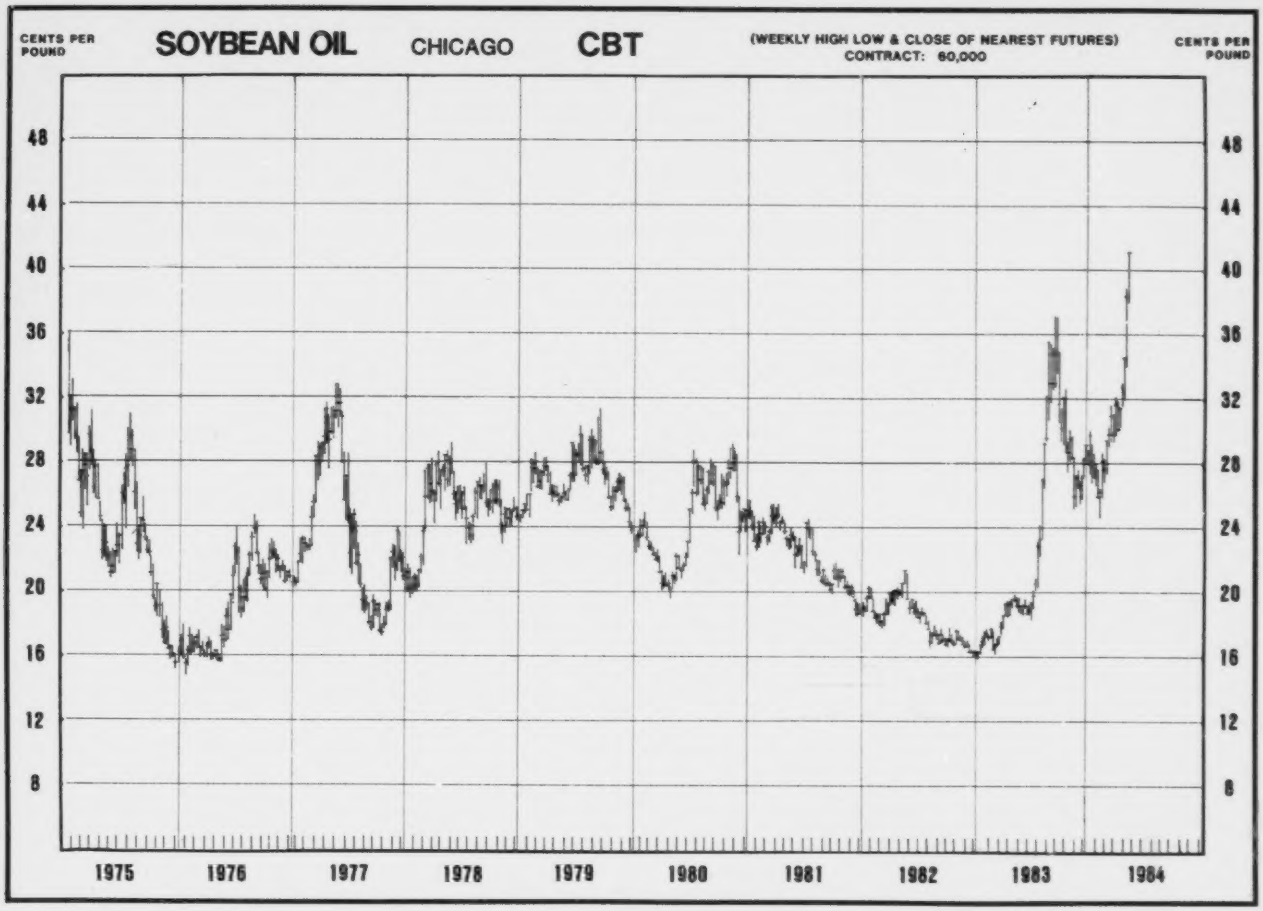
Year	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1
1973–4	515.5	531.6	599.9	690.5	623.3	642.5	626.0	726.3	765.1	708.6	702.7	777.1
1974–5	793.6	734.7	681.5	673.6	689.6	633.8	647.4	662.2	606.7	528.6	544.3	567.1
1975–6	560.5	568.0	657.7	799.9	844.8	913.3	946.0	1,061	1,109	1,275	1,230	1,295
1976–7	1,251	1,351	1,432	1,488	1,606	1,616	1,493	1,485	1,361	1,174	1,037	942.5
1977–8	771.1	756.4	771.1	864.0	913.8	856.5	803.8	822.2	828.7	834.4	820.8	777.5
1978–9	728.6	813.4	837.1	970.6	932.2	942.8	1,004	987.3	1,043	922.9	915.4	815.1
1979–0	775.8	819.8	867.3	1,030	1,155	1,205	1,176	1,184	1,145	1,226	1,305	1,263
1980–1	1,210	1,428	1,677	1,738	1,900	1,976	2,017	2,119	2,166	2,139	2,024	1,783
1981–2	1,736	1,790	1,884	2,024	2,160	2,141	2,141	2,112	2,018	1,889	1,647	1,398
1982–3[1]	1,103	1,208	1,305	1,587	1,713	1,700	1,842	1,600	1,552	1,546	1,411	1,408
1983–4[1]	1,261	1,453	1,661	1,919	1,907	1,583	1,516					

[1] Preliminary. *Source: Bureau of the Census* T.616

Average Prices of Crude Domestic Soybean Oil (in Tank Cars) F.O.B. Decatur In Cents per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1973–4	23.1	20.4	26.0	28.6	36.4	30.2	28.2	29.4	31.6	40.5	43.3	40.7	31.5
1974–5	42.3	40.4	38.0	33.6	29.4	29.1	28.2	23.6	23.3	27.5	28.5	24.4	30.7
1975–6	21.4	18.9	16.8	16.2	16.3	16.6	16.3	15.8	17.6	20.9	20.4	22.5	18.3
1976–7	20.7	21.8	21.0	20.9	22.4	26.5	29.6	31.3	28.3	23.8	21.1	19.2	23.9
1977–8	18.8	21.0	22.6	20.9	21.6	26.6	26.8	28.8	26.9	25.9	26.3	27.8	24.5
1978–9	26.7	23.7	25.8	25.8	27.3	26.9	26.7	27.8	27.4	29.1	29.2	30.0	27.2
1979–0	27.9	27.8	26.2	23.6	23.4	22.1	20.3	20.8	21.6	26.2	25.9	26.1	24.3
1980–1	25.1	26.7	23.7	23.0	22.0	23.1	23.4	21.6	21.3	22.8	20.8	19.4	22.7
1981–2	19.7	19.9	18.9	18.4	18.2	18.5	19.7	20.6	19.4	19.0	17.9	17.4	19.0
1982–3	17.4	17.6	16.6	16.4	17.3	17.7	19.3	19.8	19.4	21.6	30.2	34.3	20.6
1983–4	30.7	28.1	27.3										

Source: Bureau of Labor Statistics T.620

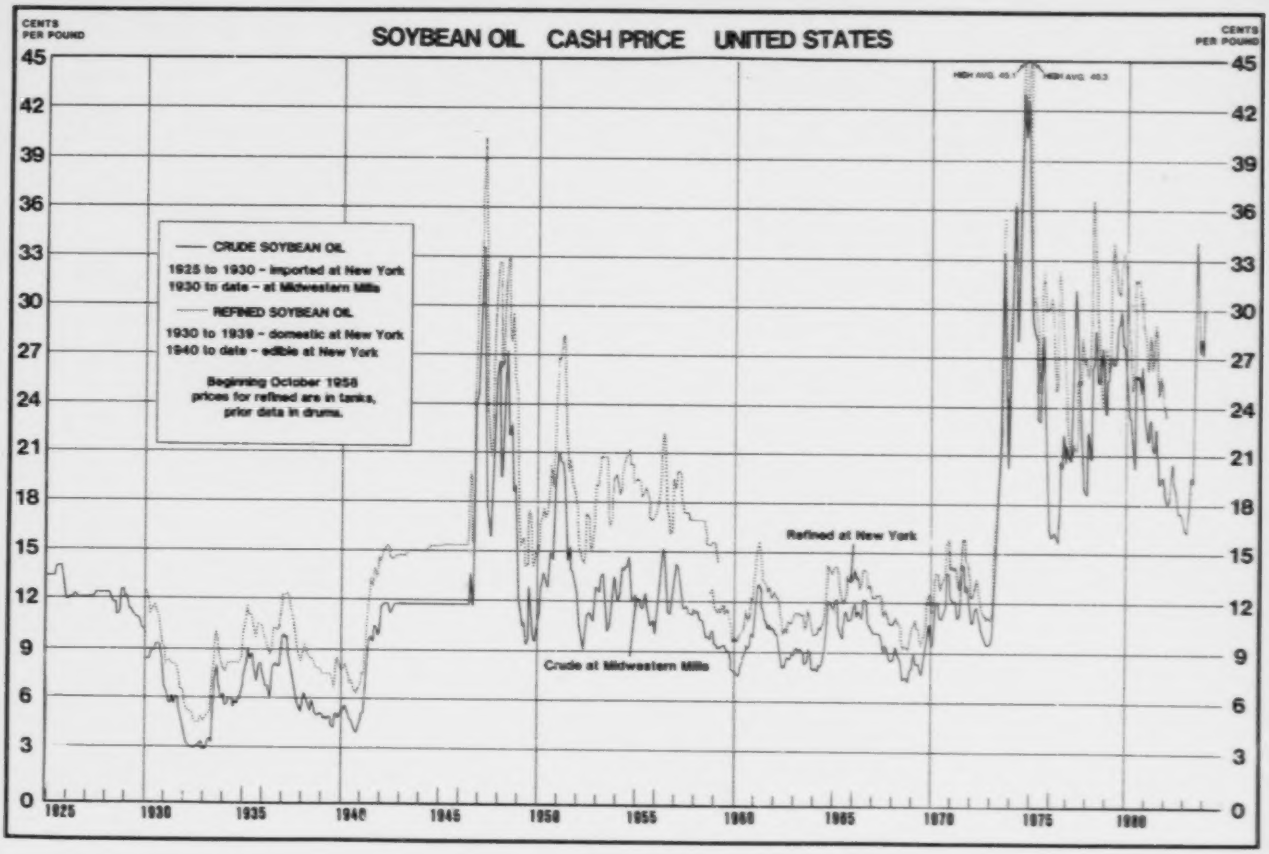


High, Low & Closing Prices of May Soybean Oil Futures on the Chicago Board of Trade ¢ per lb.

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	26.20	27.35	27.90	28.35	23.32	20.95	20.39	20.10	21.75	22.40	21.88	22.15	28.25	28.65	28.80	28.80
	Low	24.50	25.20	25.60	22.90	20.35	18.35	18.05	18.00	18.65	20.40	19.82	20.02	22.25	24.15	26.30	18.00
	Close	26.00	26.55	27.90	24.32	20.70	18.50	19.82	18.92	20.45	21.05	20.36	22.13	26.15	27.47	27.97	—
1979	High	22.13	23.70	25.12	24.95	22.45	24.05	25.15	26.35	25.80	25.70	25.97	28.85	28.30	27.85	26.45	28.85
	Low	21.40	20.90	21.50	21.35	20.95	21.10	23.10	23.92	23.55	23.92	24.28	25.31	26.35	25.50	25.27	20.90
	Close	21.75	21.58	25.00	22.30	22.13	22.90	24.10	25.90	24.65	24.67	25.37	27.53	27.57	26.00	25.85	—
1980	High	25.70	25.74	26.45	29.20	28.45	27.35	28.25	27.25	26.50	26.15	24.80	25.37	23.54	21.19	21.20	29.20
	Low	24.70	24.55	25.25	25.95	25.80	25.35	25.55	25.05	25.16	24.60	23.45	23.21	20.72	19.53	19.75	19.53
	Close	25.25	25.37	26.22	26.60	26.05	26.40	26.68	25.58	25.88	24.62	24.63	23.32	20.74	19.86	20.90	—
1981	High	26.15	24.00	24.05	25.65	29.40	28.55	29.70	29.20	31.45	30.75	27.35	25.55	25.40	25.51	24.05	31.45
	Low	23.60	22.35	22.35	22.80	25.45	26.50	26.80	26.81	28.25	24.25	23.40	23.60	23.50	23.60	22.61	22.35
	Close	23.60	22.37	23.38	25.62	28.30	28.05	27.21	28.28	30.70	26.00	23.57	24.84	25.15	23.84	22.85	—
1982	High	28.60	29.02	28.10	26.50	27.90	25.90	24.50	24.25	23.25	21.85	21.01	21.08	19.45	20.25	20.90	29.02
	Low	27.13	27.75	26.30	24.70	24.85	23.50	22.52	22.45	21.20	19.65	19.70	18.72	18.26	18.88	19.70	18.26
	Close	28.60	27.75	26.35	25.02	25.90	23.60	22.87	23.00	21.21	19.76	20.88	19.13	18.88	19.83	20.72	—
1983	High	—	—	22.90	21.65	20.42	19.90	19.35	18.60	18.40	17.75	17.96	18.30	18.59	19.64	19.85	22.90
	Low	—	—	21.66	20.30	19.73	18.15	18.00	17.50	17.25	16.91	16.61	16.65	16.80	18.54	18.92	16.61
	Close	—	—	21.66	20.32	19.73	18.85	18.00	17.60	17.48	16.91	17.91	16.74	18.56	19.61	19.29	—
1984	High	—	21.60	21.60	20.75	25.25	34.00	35.85	22.60	30.70	30.10	30.60	28.82	31.55	33.70		
	Low	—	20.75	19.27	19.75	20.50	25.05	29.90	28.35	26.20	26.50	27.00	25.05	27.72	29.70		
	Close	—	21.53	20.20	20.75	24.30	32.75	31.00	28.88	27.74	30.08	27.68	28.25	29.82	32.47		

Source: Chicago Board of Trade

T.622



Month-End Open Interest of Soybean Oil Futures of the Chicago Board of Trade In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	40,175	44,145	49,994	49,592	55,292	52,682	52,230	49,553	50,322	60,842	57,363	54,133
1979	50,713	57,729	57,893	55,657	57,820	64,671	58,852	58,258	60,854	67,778	65,893	64,374
1980	62,515	63,472	59,707	52,805	61,089	65,949	64,710	63,908	66,723	75,815	91,407	71,527
1981	58,671	65,580	57,956	67,241	56,968	63,400	54,007	56,847	49,411	50,786	54,232	48,295
1982	53,029	53,375	49,824	53,395	57,366	58,151	56,863	50,574	44,091	41,930	45,976	50,290
1983	49,329	49,360	57,446	59,894	58,635	55,678	53,842	71,341	73,946	79,303	74,817	67,695
1984	58,227	54,536	53,081	60,190								

Source: Chicago Board of Trade

T.625

Volume of Trading of Soybean Oil Futures at the Chicago Board of Trade In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	209.5	183.4	312.7	266.8	258.1	278.6	215.2	236.3	204.3	285.4	257.3	201.7	2,909
1979	215.0	291.5	233.8	254.4	212.3	321.7	313.0	252.5	262.0	311.6	222.3	191.6	3,082
1980	200.7	210.3	177.1	185.0	198.2	216.9	361.8	284.8	329.9	332.6	327.0	343.7	3,168
1981	243.8	231.1	237.9	254.0	221.7	274.8	355.1	233.7	240.2	235.0	228.1	292.1	3,047
1982	219.1	245.6	239.8	272.2	277.7	270.7	264.5	294.9	260.5	195.4	307.4	221.6	3,049
1983	273.6	244.1	264.4	273.2	233.1	288.9	322.6	452.3	445.4	278.7	355.5	319.2	3,861
1984	358.3	346.5	337.7	360.0									

Source: Chicago Board of Trade

T.626

Soybeans

Soybeans in recent years have accounted for between 51 and 55 percent of estimated world production of major oilseeds (soybeans, cottonseed, peanut, sunflowerseed, rapeseed, flaxseed, copra and palm kernel). However, the share of total production accounted for by soybeans in 1983/84 dropped to about 48 percent, because of the sharp reduction in the U.S. crop. In recent seasons, cottonseed has accounted for 15 to 17 percent of world oilseed crops; peanuts—10 to 12 percent; sunflowerseed—8 to 10 percent; and rapeseed—6 to 9 percent.

The U.S. is the world's largest producer of soybeans, accounting for an average 64 percent of the total in 1977/78–1981/82. Brazil was the next most important producer in this period, accounting for an average 15 percent of the total, followed by China with 10 percent and Argentina with 4 percent of the world crop. However, in 1983/84 the U.S. share dropped while that of the other major producers increased, according to an April estimate of the USDA. The U.S. share of total output was estimated at 55 percent (43.4 million tonnes), Brazil—19 percent (15.2 million), China—12 percent (9.3 million), and Argentina—7 percent (4.3 million tonnes).

The area planted to U.S. soybeans in 1983 totaled 63.5 million acres, and acreage harvested 62.2 million, both down 11 percent from a year earlier. The average yield per acre, at 25.7 bushels, was down 6.2 bushels from the preceding year, and the lowest since 1974. Estimated 1983 U.S. soybean production of 1.6 billion bushels (43.3 million metric tons) was 28 percent less than the 1982 crop, the lowest since 1976, and the largest year-to-year percentage decline in production since 1936.

The record-large 383 million bushels of soybeans on hand at the start of the 1983/84 U.S. soybean marketing season on September 1, 1983 helped to cushion the sharp reduction in crop size. However, total supply for the 1983/84 season of 1.98 billion bushels was still 21 percent below 1982/83 supply. Total disappearance of U.S. soybeans in the 1983/84 season was expected to represent 95 percent of total supplies, up sharply from 84 percent in 1982/83. During the past four seasons, use averaged 86 percent of supplies.

The 1983/84 U.S. soybean crush was estimated by the USDA at 970 million bushels. A crush of this size would represent 49 percent of total 1983/84 U.S. soybean supplies, but below a billion bushels for the first time since 1977/78. During the preceding four seasons, the crush averaged 45 percent of supplies.

U.S. soybean exports in 1983/84 were expected to drop to 760 million bushels from the 1982/83 total of 905 million—a reduction of 16 percent, and the lowest since 1977/78. Two major negative factors for U.S. soybean exports were increased foreign competition and the continued strength of the U.S. dollar. Consequently, the U.S. share of world exports was expected to drop to less than 80 percent from 86 percent in 1982/83.

Carryover on August 31, 1984 was projected to be as low as 105 million bushels—representing an exceptionally low stocks-to-use ratio of less than 6 percent. From 1979/80 through 1982/83, the stocks-to-use ratio averaged 16.6 percent.

A USDA study of pricing patterns for "short" crop years (1974/75, 1976/77, and 1980/81), and "normal" crop years (1977/78, 1978/79, and 1982/83), showed that in short crop years prices reach a peak early in the marketing year, decline over winter, and then rise in the spring. Finally, prices trail off over summer in anticipation of a larger new crop. In normal years, prices are usually lowest during and immediately after harvest, and rise throughout the marketing year, to reach their seasonal highs immediately before the next harvest. The USDA noted two reasons for the mid-season price bulge observed in recent short crop years. Early season buying, particularly by foreign customers in anticipation of a short harvest, may require buyers to return to the market in mid-year to replenish inventories. Also, during a short crop year, price patterns may be very sensitive to the anticipated size of the South American crops. If the Brazilian and Argentinian harvests are smaller than early forecasts indicated, prices in the U.S. rise, especially when inventories are small and the market has little room to adjust.

In mid-May 1984, the USDA projected 1984/85 U.S. soybean supply at about 2.18 billion bushels, the crush at 1.04 billion, and exports at 835 million bushels. Total use was projected at 1.97 billion bushels, and ending stocks at 215 million bushels.

U.S. Government Support Program

The Secretary of Agriculture cannot establish the 1984 support price at less than $5.02 per bushel for Grade No. 1 with 12.8 to 13.0 percent moisture.

Futures Markets

Soybean futures in the U.S. are currently traded on the Chicago Board of Trade and on the MidAmerica Commodity Exchange in Chicago.

World Production of Soybeans In Thousands of Metric Tons

Year of Harvest[3]	Argentina	Brazil	Canada	China	Colombia	Indonesia	Japan	South Korea	Mexico	Romania	Paraguay	Thailand	United States	USSR	World Total
1977	2,700	9,541	580	7,300	135	523	111	319	470	191	333	90	47,947	540	72,157
1978	3,700	10,240	516	7,565	137	680	190	293	330	230	549	100	50,898	634	77,266
1979	3,600	15,156	671	7,460	146	642	192	257	680	383	575	102	61,722	467	93,705
1980	3,500	15,200	713	7,940	89	687	174	216	280	448	600	105	48,772	525	80,786
1981	4,150	12,835	607	9,330	100	609	212	257	680	268	600	131	54,435	450	86,292
1982[1]	3,570	14,750	857	9,030	110	620	226	233	550	352	500	117	60,677	480	94,007
1983[3]	5,300	15,200	721	9,300							625	110	43,421		79,435

[1] Preliminary. [2] Projected. [3] Split year includes Northern Hemisphere crops harvested in the late months of the first year shown combined with Southern Hemisphere crops harvested in the early months of the following year. *Source: Foreign Agricultural Service, U.S.D.A.* T.627

SOYBEANS

U.S. Soybean Price Support Program & Official Crop Production Reports In Millions of Bushels

			Sept. 1 Stocks		National Avg. Support		(In Thousands of Bushels) Crop Production Reports					
Year	Quantity Put Under Support	Deliveries to C.C.C.	Total	Gov't. Owned	% of Parity	$ Per Bu.	August 1	September 1	October 1	November 1	December 1	Final
1971	168.2	[2]	98.8	11.4	56	2.25	1,235,451	1,186,301	1,175,447	1,200,201	1,169,361	1,176,101
1972	90.6	[2]	72.0	1.5	54	2.25	1,269,616	1,286,015	1,317,090	1,350,517	1,276,290	1,270,608
1973	124.2	[2]	59.6	—	45	2.25	1,539,771	1,598,746	1,588,361	1,574,586	1,566,518	1,547,543
1974	34.6	—	170.8	—	37	2.25	1,314,232	1,315,792	1,262,352	1,243,912	1,233,425	1,216,287
1975	—	—	188.2	.4	—None—		1,457,672	1,442,422	1,473,782	1,519,882	1,521,370	1,548,344
1976	22.5	—	244.9	—	34	2.50	1,344,343	1,274,263	1,249,713	1,252,148	1,287,560	1,288,608
1977	97.5	—	102.9	—	46	3.50	1,602,065	1,644,220	1,647,315	1,682,705	1,761,755	1,767,267
1978	64.2	—	161.0	—	51	4.50	1,765,024	1,772,364	1,792,064	1,810,389	1,870,181	1,868,754
1979	120.0	—	174.1	—	45	4.50	2,129,254	2,174,179	2,213,289	2,235,869	2,267,647	2,267,901
1980	—	—	358.8	—	43	5.02	1,880,342	1,831,172	1,757,272	1,774,742	1,817,097	1,792,062
1981	—	—	318.3	—	40	5.02	2,017,468	2,089,418	2,106,568	2,076,998	2,030,452	2,000,145
1982[1]	—	—	266.2	—	39	5.02	2,293,420	2,313,880	2,300,345	2,299,520	2,276,976	2,229,486
1983[1]			383.3			5.02	1,843,459	1,534,969	1,517,019	1,536,519	1,595,437	
1984[1]						5.02						

[1] Preliminary. [2] Less than 50,000 bushels. *Source: Crop Reporting Board, U.S.D.A.* T.628

Soybean Stocks in the United States In Thousands of Bushels

	On Farms				Off Farms				Total Stocks			
Year	Jan. 1	April 1	June 1[2]	Sept. 1	Jan. 1	April 1	June 1[2]	Sept. 1	Jan. 1	April 1	June 1[2]	Sept. 1
1971	391,960	246,491	90,595	20,554	553,012	369,063	190,832	78,225	944,972	615,554	281,427	98,779
1972	397,605	218,609	58,438	11,779	491,387	333,677	174,394	60,183	888,992	552,286	232,832	71,962
1973	429,071	145,333	33,855	9,415	437,924	358,372	145,352	50,222	866,995	503,705	179,207	59,637
1974	608,160	331,885	151,104	64,545	552,756	405,943	190,865	106,337	1,160,916	737,828	341,969	170,882
1975	483,869	331,241	165,324	75,114	505,392	323,317	191,704	109,922	989,261	654,558	357,028	185,036
1976	590,466	411,366	253,963	86,150	665,689	456,283	300,938	158,781	1,256,155	867,649	554,901	244,931
1977	473,120	227,723	92,374	32,748	559,045	390,214	243,335	70,168	1,032,165	617,937	335,709	102,916
1978	672,861	393,684	207,102	59,000	652,400	455,448	298,815	102,044	1,325,261	849,132	505,917	161,044
1979	699,556	412,570	241,255	61,509	692,534	467,646	284,850	112,579	1,392,090	880,216	526,105	174,088
1980	892,934	602,779	396,650	128,888	877,896	580,322	378,152	229,880	1,770,830	1,183,101	774,802	358,768
1981	730,157	533,082	362,266	159,029	790,300	496,619	317,156	159,276	1,520,457	1,029,701	679,422	318,305
1982	888,184	581,276	360,237	129,602	743,188	459,361	291,921	136,571	1,631,372	1,040,637	652,158	266,173
1983[1]	1,051,706	674,289	465,613	146,246	752,223	501,186	391,353	237,045	1,803,929	1,177,475	856,966	383,291
1984[1]	631,660	339,055			663,767	414,057			1,295,427	753,112		
1985												

[1] Preliminary. [2] Data prior to 1976 are AS OF JULY 1. *Source: Crop Reporting Board, U.S.D.A.* T.629

U.S. Commercial Stocks of Soybeans on the First of the Month In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct	Nov.	Dec.
1971	47.2	51.4	54.4	57.1	54.2	41.6	35.0	36.5	17.3	12.1	48.5	48.8
1972	41.8	37.7	41.1	49.0	48.4	36.1	27.1	18.8	13.6	7.0	25.0	32.0
1973	39.1	32.0	56.8	59.7	48.9	31.8	22.8	16.6	12.1	10.5	30.4	35.6
1974	33.6	32.0	35.3	36.2	27.3	21.2	21.2	20.3	18.0	14.3	51.6	55.4
1975	48.1	43.3	40.5	31.1	18.0	12.8	16.6	13.0	12.6	14.2	60.2	62.5
1976	52.0	55.7	57.1	51.7	42.5	37.0	32.5	30.4	21.3	27.9	54.4	52.2
1977	46.8	49.5	51.1	52.3	55.4	50.0	38.7	19.6	8.5	10.9	43.6	50.9
1978	46.2	44.3	41.8	49.1	47.9	42.7	30.6	23.0	10.7	13.0	58.3	63.2
1979	60.9	57.6	62.0	60.8	52.5	40.7	37.6	31.2	19.3	11.5	77.6	84.9
1980	76.5	71.5	73.2	72.3	56.5	52.6	53.2	51.8	44.8	51.5	80.6	79.5
1981	73.1	71.1	69.0	53.1	45.3	35.7	24.7	19.0	11.2	12.6	40.7	51.7
1982	50.6	50.4	41.1	39.9	34.7	67.4	21.5	18.4	11.5	12.8	43.9	53.5
1983	53.6	58.2	57.5	55.7	55.9	44.7	34.9	35.8	42.5	46.4		
1984	77.2	74.4	65.2	58.6	49.2							
1985												

Source: Foreign Agricultural Service, U.S.D.A. T.630

Salient Statistics of Soybeans in the United States

Crop Year	Planted Alone	Acreage Harvested	Yield Per Acre (Bus.)	Farm Price ($ Bu.)	Farm Value (Million Dollars)	Pounds Per Bushel Crushed		U.S. Exports of Soybeans Crop Year (Sept.-Aug.) (Ths. Metric Tons[2])								
	— 1,000 Acres —					Yield of Oil	Yield of Meal	Grand Total	Bel.-Luxem.	Denmark	Canada	W. Germany	Japan	Netherlands	Taiwan	U.S.S.R.
1971–2	43,472	42,705	27.5	3.03	3,560	10.98	47.43	416.8	5.7	16.2	31.3	52.0	107.4	64.1	23.9	0
1972–3	46,885	45,683	27.8	4.37	5,550	10.59	47.04	479.4	8.2	17.4	22.1	54.7	121.0	84.3	19.6	31.5
1973–4	56,675	55,667	27.8	5.68	8,790	10.76	47.18	539.1	13.2	12.5	37.9	72.9	98.8	101.1	20.5	.7
1974–5	53,507	51,341	23.7	6.64	8,079	10.51	47.48	420.7	5.6	5.9	26.9	51.0	96.9	77.7	24.4	0
1975–6	54,550	53,617	28.9	4.92	7,622	10.94	47.27	555.1	17.7	15.1	28.0	45.6	118.1	130.5	32.8	11.4
1976–7	50,226	49,401	26.1	6.81	8,776	11.09	47.81	15,351	411	306	462	1,520	3,219	3,007	697	825
1977–8	58,760	57,830	30.6	5.88	10,383	10.89	47.34	19,061	475	423	264	1,521	3,636	4,086	854	744
1978–9	64,708	63,663	29.4	6.66	12,450	11.07	47.63	20,117	420	341	352	1,486	3,865	4,012	1,271	1,178
1979–0	71,632	70,566	32.1	6.28	14,250	10.74	48.01	23,818	584	342	392	1,318	3,868	6,035	780	813
1980–1	70,037	67,856	26.4	7.57	13,560	11.08	47.93	19,712	670	156	345	1,791	3,816	3,839	1,063	
1981–2	67,810	66,368	30.1	6.04	12,071	10.70	47.85	25,285	1,404	167	310	2,135	4,196	5,349	1,059	683
1982–3[1]	71,530	69,821	31.9	5.65	12,594	10.75	47.61	24,634	1,259	160	324	1,813	4,580	4,648	1,300	199
1983–4[1]	63,480	62,163	25.7	7.88	12,569			20,139								
1984–5[1]	65,240															

[1] Preliminary. [2] Data prior to 1976–7 are in MILLIONS OF BUSHELS. *Source: Crop Reporting Board, U.S.D.A.* T.631

Supply and Distribution of Soybeans in the United States In Millions of Bushels

Crop Year Begin. Sept. 1	Supply						Distribution					
	Stocks, Sept. 1											
	Farms	CCC	Mills, Elevators[2]	Total	Production	Total Supply	Crushings	Exports	Seed	Feed	Residual	Total Distribution
1971–2	20.6	—	78.2	98.8	1,176.1	1,274.9	720.5	416.8	51.0	1.1	13.5	1,202.9
1972–3	11.8	0	60.2	72.0	1,270.6	1,342.6	721.8	479.4	60.8	1.1	19.8	1,282.9
1973–4	9.4	0	50.2	59.6	1,547.5	1,607.1	821.3	539.1	56.1	1.2	18.7	1,436.4
1974–5	64.5	0	106.3	170.9	1,216.3	1,387.2	701.3	420.7	57.2	1.0	21.7	1,198.9
1975–6	75.1	0	109.9	188.2	1,548.3	1,736.5	865.1	555.1	53.5	1.2	15.7	1,490.6
1976–7	86.2	0	158.8	244.9	1,288.6	1,533.5	790.2	564.1	61.0	1.0	13.3	1,429.6
1977–8	32.7	0	70.2	102.9	1,767.3	1,870.2	926.7	700.5	68.0	1.0	13.0	1,703.6
1978–9	59.0	0	102.0	161.0	1,868.8	2,029.8	1,018	739.0	75.0	1.0	23.0	1,856.0
1979–0	61.5	0	112.6	174.1	2,267.9	2,442.0	1,123	875.0	67.0	1.0	17.0	2,083.0
1980–1	128.9	0	229.9	358.8	1,792.1	2,350.0	1,020	724.0	66		23.0	1,833.0
1981–2	159.0	0	159.3	318.3	2,000.1	2,318.4	1,030	929.0	70		23.0	2,052.0
1982–3[3]	129.6	0	136.6	266.2	2,229.5	2,495.7	1,108	905	95			2,108
1983–4[3]	146.2	0	237.0	383.3	1,595.4	1,978.7	985	725	118			1,828
1984–5[3]				150								

[1] Preliminary. [2] Also warehouses. [3] Estimates. *Source: Economic Research Service, U.S.D.A.* T.632

Production of Soybeans for Beans in the U.S., by Selected States In Millions of Bushels

Year	Ark.	So. Car.	Ill.	Ind.	Iowa	La.	Mich.	Minn.	Miss.	Mo.	N. Car.	Ohio	Tenn.	Nebr.	Ky.
1971	92.5	23.0	236.0	111.4	178.8	39.5	10.3	63.9	56.6	97.3	23.8	80.3	31.7	15.2	20.8
1972	81.0	20.0	259.4	108.8	216.0	38.3	13.6	90.3	48.0	108.9	29.1	79.8	28.6	23.0	23.6
1973	116.3	23.0	281.3	135.1	263.5	34.8	16.6	127.3	60.5	126.9	34.8	89.8	36.9	36.3	26.0
1974	81.7	24.0	202.6	97.3	199.1	44.0	13.2	84.0	46.3	93.5	30.5	79.8	31.9	28.2	25.0
1975	117.5	30.4	299.5	121.6	237.0	48.0	15.9	98.6	70.2	113.6	33.4	102.3	46.3	32.4	29.7
1976	82.1	21.4	249.5	111.5	200.0	63.0	11.6	66.4	71.5	84.0	24.6	95.0	40.5	19.6	28.9
1977	105.8	26.7	336.3	144.3	251.3	63.0	21.6	133.8	78.5	148.8	29.0	120.0	52.2	40.7	40.9
1978	115.2	32.3	309.5	144.2	283.1	76.0	21.6	146.2	81.7	155.0	40.3	127.7	56.9	42.5	40.8
1979	144.2	39.8	379.1	159.1	306.4	93.8	30.3	162.6	118.9	183.6	45.8	144.8	70.7	54.7	54.0
1980	65.3	20.8	309.9	157.7	318.4	67.0	30.4	149.9	61.6	135.5	34.7	135.4	45.9	53.1	36.0
1981	99.0	31.0	351.5	151.8	326.0	64.2	29.1	139.2	75.6	155.6	46.3	99.8	61.1	78.7	47.9
1982	108.0	39.6	361.5	177.8	310.8	75.4	32.2	171.5	92.3	176.9	52.5	136.9	62.1	81.0	52.2
1983[1]	69.7	23.6	255.2	116.1	270.6	68.8	30.6	147.2	57.7	101.4	33.0	101.7	30.2	59.5	23.6
1984															

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.633

SOYBEANS

High, Low & Closing Prices of May Soybean Futures at the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1979	High	648	659	695	691	639	673½	697	753	736	727	733	797	785	755½	738½	797
	Low	614½	608½	619	620¼	606	606	646½	674	669	681	685	714	738	714	705¼	606
	Close	632	625½	690¼	645¼	625½	657	672¼	736½	697½	700¾	718¾	766	771¼	717	723½	—
1980	High	744½	747	760	859	823	773	790	788	739½	726½	704	710½	669½	611	624	859
	Low	735	719½	734	749	730½	720	729½	695	702	686½	653	656½	582½	569½	589½	569½
	Close	737½	739¾	756	764	738¾	757¾	762½	709¾	723¼	687¼	695½	657½	583	594½	612	—
1981	High	741½	713½	710	750	859	855½	933	997½	1,006	1,001	882	798½	788½	812½	785	1,006
	Low	696½	681	684	680	744	783	842	847½	937	765½	735	754½	719½	757½	733	680
	Close	699	692	695¾	750	822	854½	873¼	966½	997½	843½	751½	761	783½	778½	741	—
1982	High	894	922	883	832½	853½	807	751	739	721	696¼	677	683	642	670¾	669½	922½
	Low	859	872	820	772	787	722	703½	705	670	619	637	617½	605½	639½	647	605
	Close	888½	873	829	788½	812½	730	715¼	714¼	678¼	641¼	674½	632¾	640	651¾	666	—
1983	High	713	729½	723½	704½	678½	664½	611½	588	607¾	595½	620	622	643¾	655½	643	746
	Low	667½	698	687½	670	651	593½	572½	558½	570½	576¼	577	572½	577½	620¼	610¼	558½
	Close	696	716½	687½	671	654¾	601	574¼	568¼	594	581¾	618½	575½	637	640¼	621½	—
1984	High	718	732	720	678	794	984	996	927	903½	853	825	768	815	813		
	Low	645	695½	659	630	657½	760	859½	831	791	775½	738	706	762	765		
	Close	714	719	659½	660	761	930	890	851	822	843½	747½	765	789	771		
1985	High	773	777														
	Low	753	737														
	Close	768½	737														

Source: Chicago Board of Trade

T.634

Soybean Stocks at U.S. Mills on First of Month In Millions of Bushels

Crop Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1972–3	38.1	12.3	91.3	111.1	117.4	136.6	133.3	124.0	107.9	88.5	68.2	58.5
1973–4	30.7	13.5	89.5	125.8	115.8	119.0	123.0	112.3	95.5	81.5	66.5	57.0
1974–5	41.6	23.0	93.9	123.0	102.5	83.2	79.2	65.3	55.4	44.3	37.7	35.4
1975–6	27.4	26.8	116.6	137.2	131.5	121.1	109.8	101.3	92.8	79.4	80.5	66.3
1976–7	48.7	63.0	127.5	159.8	154.2	147.5	146.5	140.3	126.8	108.6	83.4	50.9
1977–8	23.4	20.3	101.5	123.9	113.0	94.4	87.3	102.8	90.2	76.3	54.5	44.6
1978–9	37.9	31.9	138.4	149.4	127.3	112.4	124.0	120.9	96.7	71.1	73.0	55.6
1979–0	37.5	39.2	166.5	184.5	163.3	145.4	130.7	118.6	95.8	79.7	75.7	73.9
1980–1	56.9	80.4	166.0	172.0	138.7	125.9	105.4	97.2	84.4	67.8	49.2	43.9
1981–2	33.4	31.5	105.8	135.2	114.5	99.8	84.6	79.2	72.2	60.8	51.2	43.6
1982–3	30.0	29.0	114.2	145.5	125.1	116.2	98.5	96.2	84.6	69.8	62.0	55.4
1983–4	58.6	63.9	124.5	144.2								
1984–5												

Sources: Economic Research Service, U.S.D.A.

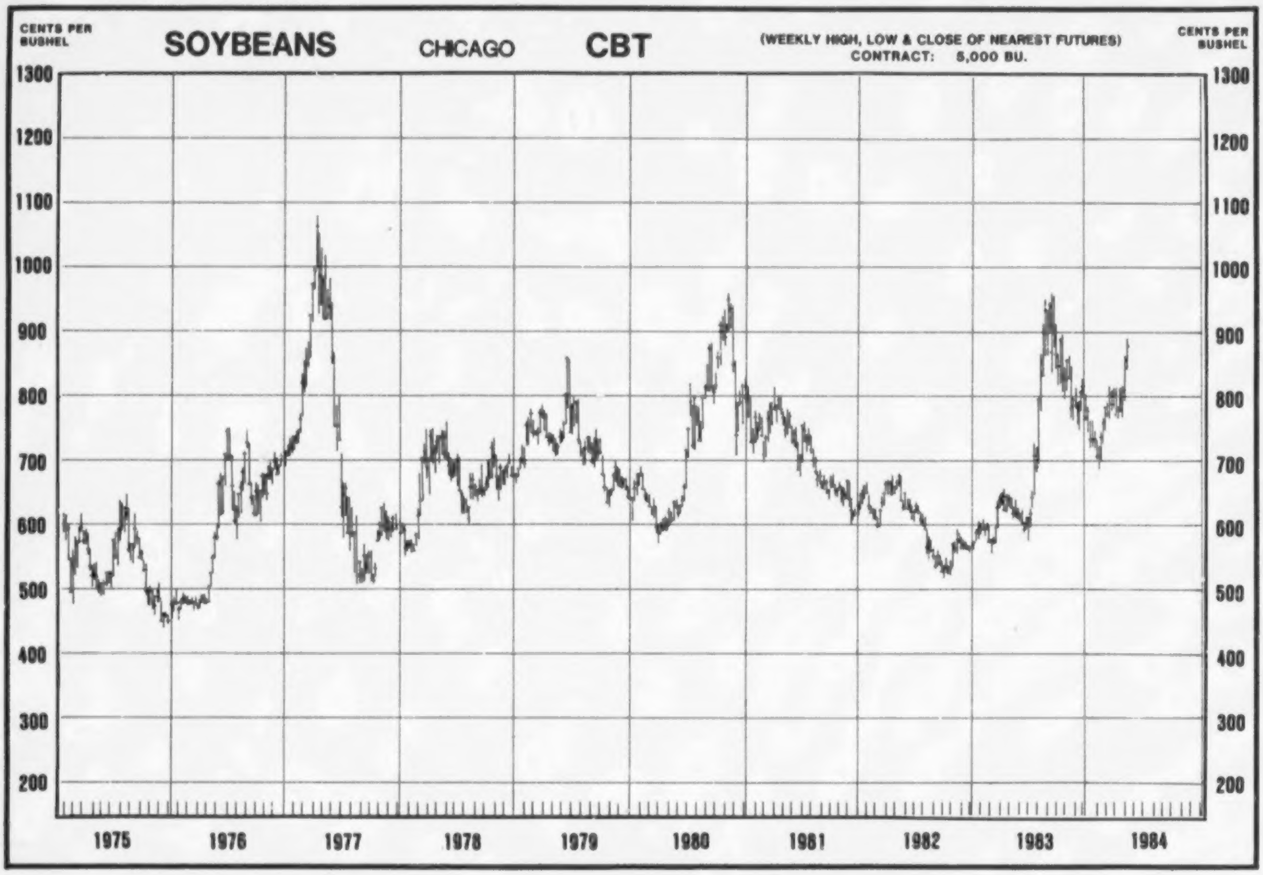
T.635

Soybean Exports from the United States In Millions of Bushels

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1971–2	29.2	29.4	47.4	50.3	42.4	35.5	31.3	37.3	31.7	31.1	26.3	24.9	416.8
1972–3	15.0	54.3	61.2	49.7	47.1	54.7	59.1	45.5	41.0	26.5	14.2	11.0	479.4
1973–4	7.5	46.6	74.4	58.0	48.3	56.4	57.9	62.0	43.5	36.1	27.1	21.2	539.1
1974–5	22.9	32.2	63.2	41.4	50.0	33.3	38.4	35.8	25.1	14.0	31.0	33.4	420.7
1975–6	24.3	62.7	61.5	49.6	51.8	52.2	52.3	50.5	49.5	47.2	29.2	24.3	555.1
1976–7	22.2	60.1	67.4	56.7	50.9	59.9	58.4	57.0	55.1	31.0	27.2	18.1	564.1
1977–8	15.0	77.6	87.7	57.0	52.6	54.4	66.6	72.7	79.3	63.4	34.7	39.3	700.5
1978–9	38.0	87.6	101.7	70.6	77.0	53.2	83.5	67.7	46.8	40.9	32.7	39.7	739.2
1979–0	40.9	88.9	118.1	78.3	85.8	73.0	69.4	81.3	74.2	58.7	49.1	57.7	875.2
1980–1	41.4	60.3	75.0	74.5	71.7	55.5	103.2	60.0	69.6	41.8	29.6	41.8	724.3
1981–2	50.9	100.8	103.7	73.6	84.3	89.4	79.0	85.7	90.6	59.8	53.8	57.5	929.1
1982–3[1]	58.0	94.4	93.6	90.1	86.3	87.2	84.4	73.3	58.5	67.7	51.6	60.2	905.2
1983–4[1]	53.9	67.6	69.2										
1984–5													

[1] Preliminary. *Source: Bureau of the Census*

T.636



Month End Open Interest of Soybean Futures at Chicago Board of Trade In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	470.3	438.0	499.4	483.9	553.5	491.8	452.8	485.8	562.2	726.6	720.1	775.1
1979	613.9	719.0	642.0	576.1	562.2	584.4	514.4	477.1	534.9	564.7	630.4	704.3
1980	533.2	540.0	502.2	449.6	513.5	615.0	703.5	784.4	880.4	1,069.6	1,102.7	1,056.4
1981	645.7	586.9	565.0	551.4	523.3	513.6	470.3	455.7	449.1	523.2	491.4	426.6
1982	400.8	391.6	435.2	422.1	399.1	377.0	400.2	353.7	357.7	422.9	433.3	424.7
1983	465.3	413.9	485.7	507.5	428.5	401.2	547.5	714.3	745.7	684.1	648.2	603.2
1984	548.3	548.9	556.2	494.5								

Source: Chicago Board of Trade T.642

Volume of Trading in Soybean Futures at the Chicago Board of Trade[1] In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	1,229	1,045	1,224	1,187	1,234	1,194	1,103	1,122	885	1,368	892	1,173	13,564
1975	1,409	1,204	1,473	1,497	1,481	1,400	2,117	1,893	1,621	2,204	1,759	1,508	19,567
1976	1,533	1,298	1,215	1,456	2,410	3,414	2,638	2,333	2,480	3,023	2,893	2,678	27,371
1977	3,483	2,564	5,062	4,707	3,550	4,012	2,468	2,312	2,378	2,734	3,897	2,813	39,981
1978	2,978	2,224	5,057	4,121	3,820	3,742	2,662	2,965	2,561	4,754	3,992	3,511	42,386
1979	3,701	5,038	4,123	3,856	3,686	5,485	4,184	2,843	2,920	3,946	3,115	2,674	45,572
1980	3,222	2,916	2,808	3,035	2,911	3,602	6,803	5,226	6,562	7,706	7,025	7,024	58,841
1981	5,808	4,074	4,796	4,585	3,917	4,737	4,821	3,897	3,626	4,087	3,765	4,337	52,450
1982	3,120	3,497	4,478	4,484	3,517	4,245	4,017	3,822	3,197	4,014	4,282	3,198	45,828
1983	3,942	3,820	4,247	4,375	4,259	4,409	6,224	8,799	7,852	8,071	6,793	5,609	68,402
1984	5,550	5,247	6,008	4,945									

[1] Trading on this market represents approximately 98% to 99% of all trading in Soybeans. [2] Preliminary. *Source: Commodity Futures Trading Commission* T.638

SOYBEANS

Soybeans Under Price Support Through the End of the Month (Cumulative Total from Current Season's Crop) In Thousands of Bushels

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1971–2	992	41,831	101,163	140,421	163,979	167,187	168,044	168,221	168,271	168,297	—	—	168,278
1972–3	58	21,067	56,609	75,190	86,803	89,338	90,368	90,546	90,561	90,560	—	—	
1973–4	171	11,009	75,213	101,310	120,240	122,752	123,613	124,067	124,170	124,188	—	—	
1974–5	121	3,868	13,186	19,410	22,426	23,275	23,828	34,217	34,543	34,574	—	—	
1975–6	—No Program—												
1976–7	270	3,398	8,471	13,398	14,966	15,253	15,433	22,450	22,491	22,491	—	—	
1977–8	360	13,135	47,879	68,269	89,128	93,293	96,234	96,808	97,048	97,146	—	—	
1978–9	0	6,403	31,008	43,015	58,278	61,489	62,365	63,146	63,508	65,087	—	—	
1979–0	11	9,507	39,559	67,372	101,052	106,135	113,638	119,860	121,684	122,013	—	—	
1980–1	22	11,705	28,541	67,744	100,809	116,167	125,480	130,236	132,346	133,160	—	—	
1981–2	1,044	26,019	81,377	138,202	191,386	208,285	216,412	219,743	144,165	221,303			
1982–3	861	50,145	203,031	311,105	363,696	382,536	391,432	393,567	394,727	395,893			
1983–4	0	9,098	32,869	62,736	84,526	92,974	98,945						
1984–5													

Source: U.S. Department of Agriculture

T.639

Soybean Receipts at Primary Markets in the United States In Thousands of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	6,672	6,048	8,164	5,508	6,116	13,053	12,438	6,075	5,237	29,273	13,580	2,358	114,972
1972	2,565	3,904	5,111	3,516	2,023	2,426	2,729	3,859	1,297	17,623	11,080	12,886	69,019
1973	13,106	8,779	6,776	4,267	5,717	3,331	3,354	2,059	1,077	14,946	13,330	3,976	80,718
1974	4,596	5,647	5,712	5,051	5,224	3,964	7,159	4,557	2,348	18,486	7,795	3,070	74,065
1975	1,969	1,390	1,865	1,823	1,843	2,665	4,505	3,066	2,131	25,944	5,988	2,049	55,238
1976	2,449	2,337	3,002	2,146	2,228	3,715	3,640	1,280	3,374	13,927	4,533	1,933	44,564
1977	3,335	3,337	4,736	4,075	6,824	781	152	1,980	1,208	11,960	7,986	4,023	50,397
1978	2,575	1,933	3,346	4,494	7,588	3,986	1,780	3,803	2,856	17,056	8,468	2,353	60,238
1979	2,718	4,007	2,938	2,916	2,669	3,545	2,370	2,034	2,375	20,795	9,360	3,138	58,965
1980	2,994	4,404	3,445	5,987	7,339	11,406	6,950	4,524	8,222	31,589	9,752	3,849	100,461
1981	4,419	3,395	3,485	4,986	3,918	4,616	3,573	3,735	7,694	21,027	13,882	5,596	80,236
1982													
1983													

Source: Chicago Board of Trade

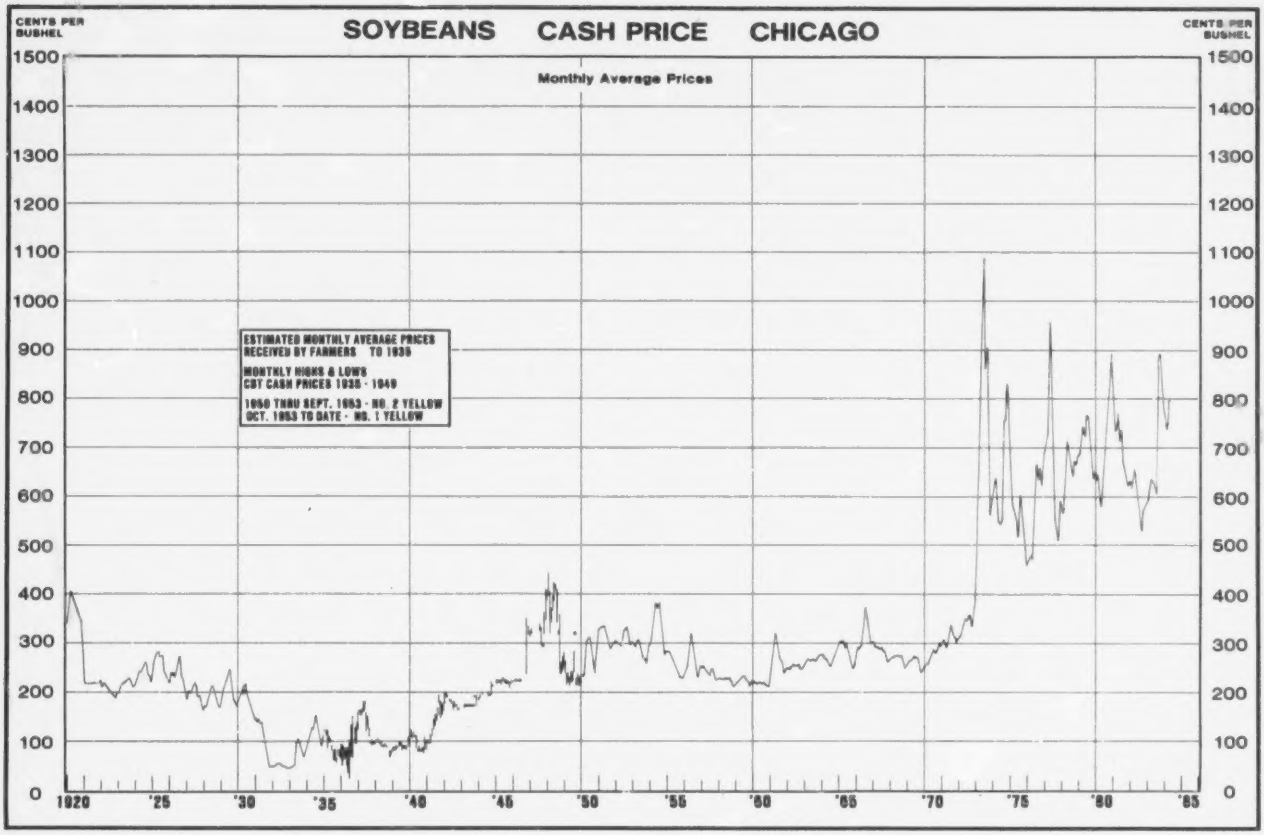
T.640

Soybeans Crushed (Factory Consumption) in the U.S. In Millions of Bushels—One Bushel = 60 Pounds

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1971–2	54.5	59.5	59.8	64.0	63.9	60.2	63.9	58.5	63.0	57.1	58.2	57.9	720.5
1972–3	52.2	66.8	70.7	69.2	70.6	64.8	64.4	58.2	61.7	52.2	44.5	46.5	721.8
1973–4	41.4	62.8	71.8	72.8	74.7	70.4	75.8	69.6	71.7	69.4	72.2	68.8	821.3
1974–5	53.6	61.6	60.8	60.2	63.1	54.1	61.0	57.5	53.0	53.1	59.2	64.0	701.3
1975–6	56.5	71.4	71.1	77.8	74.9	69.3	77.9	77.2	79.6	74.6	70.6	64.2	865.1
1976–7	68.8	72.9	73.4	72.7	72.2	71.6	74.4	67.1	61.2	56.2	50.6	49.1	790.2
1977–8	51.9	75.8	85.3	86.6	85.3	75.4	86.5	80.1	82.7	72.4	70.8	73.9	926.7
1978–9	71.4	89.3	89.6	96.4	90.6	81.5	89.0	83.3	86.9	82.8	80.6	76.4	1,018
1979–0	75.9	95.8	101.4	104.4	106.6	100.0	102.2	92.0	93.8	82.7	84.9	83.7	1,123
1980–1	81.0	97.8	98.5	94.1	92.2	79.6	88.7	85.4	82.3	73.4	72.3	74.6	1,020
1981–2	75.4	104.5	97.6	102.5	94.9	86.7	85.1	81.0	86.6	77.1	70.6	67.8	1,030
1982–3[1]	76.0	100.2	108.1	111.9	110.0	93.0	94,6	81.8	83.7	81.5	81.6	85.9	1,108
1983–4[1]	86.6	96.4	86.7										
1984–5													

[1] Preliminary. *Source: Bureau of the Census*

T.641



Average Cash Price of No. 1 Yellow Soybeans at Illinois Processor In Cents per Bushel

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1974–5	830	754	723	638	569	560	555	523	516	560	602	557	632
1975–6	501	471	460	466	477	471	475	523	623	666	631	659	526
1976–7	622	655	686	706	726	825	960	942	825	640	549	516	721
1977–8	507	584	594	573	565	658	681	701	676	662	647	642	624
1978–9	672	668	681	689	728	745	727	721	768	764	728	704	716
1979–0	656	652	653	636	642	607	580	604	610	722	745	813	660
1980–1	827	891	773	757	734	737	772	758	713	736	694	644	753
1981–2	630	628	623	630	624	616	642	656	631	620	573	540	618
1982–3	526	570	573	581	586	598	635	627	606	659	846	893	640
1983–4	846	820	777	767	737	797	798						

Source: Consumer & Marketing Service, U.S.D.A. T.643

Average Price Received by Farmers for Soybeans in the U.S. In Cents Per Bushel

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
1975–76	532	492	445	428	446	450	446	452	487	616	673	607	492
1976–77	665	590	611	656	681	706	783	905	924	813	652	548	681
1977–78	517	528	561	568	575	553	620	649	477	669	640	621	588
1978–79	620	626	641	649	658	699	716	706	706	736	736	707	666
1979–80	681	635	630	627	639	620	594	563	576	591	675	718	628
1980–81	759	768	818	780	780	750	759	760	740	705	713	671	761
1981–82	621	606	603	600	613	604	604	617	627	612	599	559	605
1982–83	522	506	534	546	556	566	582	609	606	590	627	757	588
1983–84	828	796	781	775	785	729	768	765					

Source: Crop Reporting Board T.637

Stock Index Futures

Throughout most of the first half of 1983, a bull move in the stock market was influenced by growing anticipation of a turnaround from the depressed economic levels that prevailed during 1982. This optimism was justified by a sharp decline in both long- and short-term interest rates during the year. Falling interest rates also facilitated speculative buyers' purchases of stock on credit.

By the summer of 1983, however, stock index futures prices had leveled off and then settled into a broad trading range that persisted through January 1984. This indecisive price movement reflected uncertainty about how the Federal Reserve would react to a growing awareness that the economic recovery could approach an inflationary expansion. In the last months of 1983, interest rates began to creep upward as Fed Chairman Volcker insisted that the Fed was prepared to hold the line against inflation. Stock index futures declined sharply in early February 1984, and later trading was characterized by erratic price fluctuations within another broad trading range through the first half of the year.

Futures Markets

Value Line and Mini Value Line futures are traded on the Kansas City Board of Trade. S&P 500 and S&P 100 Index futures traded are traded on the Chicago Mercantile Exchange. Futures based on the New York Stock Exchange Composite Index are traded on the New York Futures Exchange.

High, Low & Closing Prices of the December S&P 500 Stock Futures Index at the Chi. IOM

Year of Delivery		Yr. Prior to Del.	Delivery Year												Life of Delivery
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Range
1982	High	Futures Trading				124.20	121.90	113.85	115.90	120.30	127.65	143.00	146.80	145.70	146.80
	Low	Began				117.80	111.80	104.35	106.80	101.40	116.95	118.55	131.40	134.75	101.40
	Close	April 21, 1982				120.60	112.05	111.85	107.90	119.45	119.35	134.55	138.65	135.30	—
1983	High	147.20	152.60	156.50	158.00	166.70	170.70	175.05	173.70	167.50	172.60	174.25	169.70	167.55	175.05
	Low	138.00	140.60	144.75	151.10	151.90	162.50	161.90	168.85	160.65	165.50	164.15	164.20	161.75	138.0
	Close	143.00	149.20	152.40	154.05	166.40	164.30	171.35	165.00	165.95	168.25	165.45	166.50	161.75	—
1984	High	175.00	177.30	171.50	166.75	166.20									
	Low	169.95	170.65	158.60	154.60	159.70									
	Close	173.85	171.00	162.50	165.35	166.00									

High, Low & Closing Prices of the December NYSE Composite Stock Futures Index at New York

Year of Delivery		Yr. Prior to Delivery		Delivery Year												Life of Delivery
		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Range
1982	High	Futures Trading						70.55	65.35	66.85	69.10	73.50	82.10	84.45	83.95	84.45
	Low	Began						64.65	60.20	61.45	58.10	67.20	68.15	76.10	77.70	58.10
	Close	May 6, 1982						64.60	64.30	62.05	68.45	68.45	77.55	81.65	81.30	—
1983	High	85.70	85.35	88.20	90.25	91.00	95.90	98.25	101.45	100.75	96.80	99.85	100.50	97.75	96.90	101.45
	Low	78.80	80.20	81.50	83.80	87.00	87.65	93.65	94.30	95.00	92.70	95.50	94.65	94.10	93.80	60.25
	Close	84.00	83.30	86.70	88.05	88.65	95.75	95.65	99.35	95.55	95.80	97.30	95.45	96.30	94.95	—
1984	High	102.25	101.15	102.65	99.30	95.90	95.45									
	Low	98.25	98.50	98.70	91.00	91.90	91.80									
	Close	100.95	99.85	99.00	93.90	95.15	95.35									

High, Low & Closing Prices of the December Value Line Stock Futures Index at the K.C. Board of Trade

Year of Delivery		Yr. Prior to Delivery		Delivery Year												Life of Delivery
		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Range
1982	High	Futures Trading			137.00	132.50	136.00	134.70	123.50	124.25	130.65	137.65	154.70	164.95	164.70	164.95
	Low	Began			129.90	117.00	125.30	122.10	112.70	115.20	109.90	127.40	128.50	146.80	151.90	109.90
	Close	Feb. 24, 1982			130.10	125.20	133.60	122.65	119.35	116.55	130.00	129.40	147.00	159.15	158.94	—
1983	High	165.65	168.50	175.50	181.00	184.25	192.80	204.80	213.35	211.70	200.90	206.45	205.60	201.30	199.05	213.35
	Low	150.30	155.55	160.80	168.10	177.20	178.20	189.65	199.50	199.75	192.25	196.70	189.25	189.30	192.45	111.40
	Close	161.55	163.20	172.65	177.20	180.60	192.60	200.60	209.95	201.15	197.80	200.25	190.75	197.85	194.05	—
1984	High	—	—	210.80	200.60	191.95	188.20									
	Low	—	—	201.00	184.00	185.60	181.35									
	Close	—	—	201.00	187.60	188.85	186.25									

T.643A

Month End Open Interest of S&P 500 Futures Index at Chicago IOM in Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	—	—	—	1,613	6,780	9,603	15,482	13,840	12,901	12,625	16,601	11,681
1983	15,748	22,841	17,766	25,556	30,796	25,013	28,616	29,747	24,129	29,329	27,967	25,349
1984	34,012	38,441	27,931	33,389								

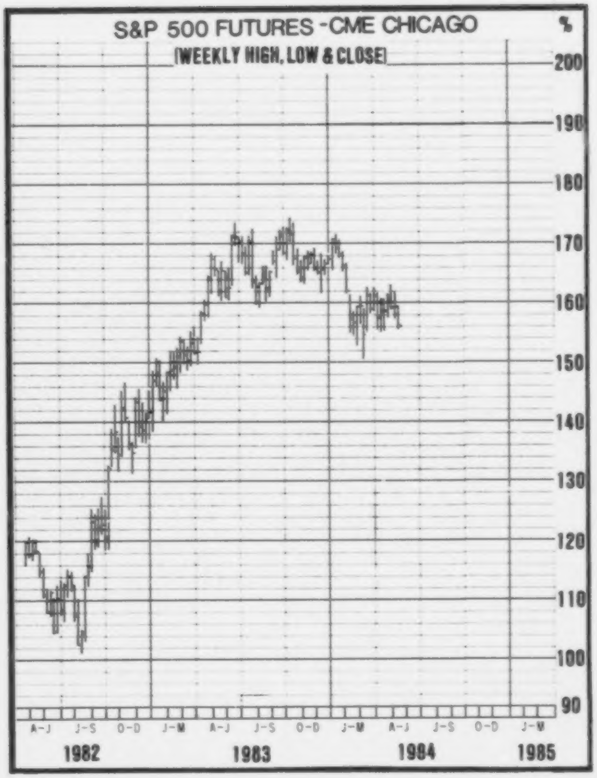
Month End Open Interest of NYSE Composite Futures Index at New York in Contracts

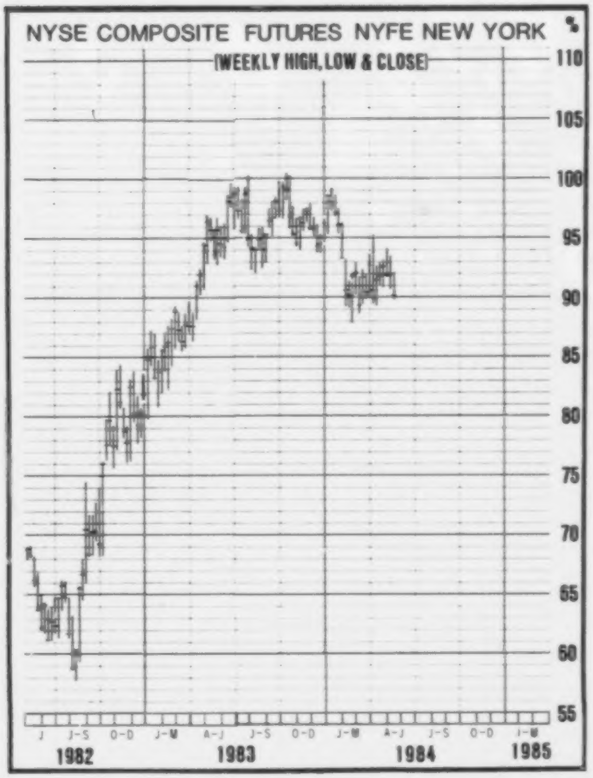
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	—	—	—	—	4,024	4,384	4,646	4,690	5,722	5,459	7,753	5,273
1983	6,841	10,781	6,583	9,120	10,426	9,397	11,354	10,032	8,066	10,303	9,461	8,539
1984	9,348	9,874	8,571	8,454								

Month End Open Interest of KC Value Line Futures Index at Kansas City in Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	—	1,402	3,679	3,176	3,803	4,250	5,065	5,858	3,456	3,235	3,094	2,777
1983	3,292	3,942	2,879	2,948	4,482	4,487	4,408	3,654	3,381	3,476	3,924	4,498
1984	4,019	5,032	3,241	3,235								

T.643B





Sugar

World centrifugal sugar output in 1983/84 was estimated at 95 million tonnes, raw value, 6 percent below the previous season's record production. Available information from the Soviet Union confirmed the USDA's early projection of a much improved sugar crop in that country. Soviet beet yields were estimated 19 percent above the previous season, and production was estimated at 8.5 million tonnes, about 9 percent of the total world production. China's sugar output was estimated at a record 4.3 million tonnes, up 10 percent from earlier estimates. However, it was thought that damage to the Philippine sugar crop due to drought may have been more extensive than earlier estimated. At the same time, freezing weather in December 1983 reduced cane sugar production in the U.S. World sugar consumption continued to be forecast at 94 to 95 million tonnes in 1983/84. Record stocks, projected to be about 46 million tonnes, were expected to continue to rise.

The 94 million tonnes consumption estimate for 1983/84 (up 2.2 percent from 1982/83), was based largely on expectations of population increase. It was thought that improvement in the world economy could perhaps boost sugar demand another percentage point, given the low world prices for sugar that prevailed during most of 1983/84. However, it was generally expected that demand would remain subdued, that stocks would continue to be large, and that, therefore, prices would remain low. In addition, world sugar output was expected to rise in 1984/85, although probably not to the record 101 million tonnes that was achieved in 1982/83. Trade sources placed European Community (EC) acreage at 3 to 4 percent above the previous season.

The increased strength of the U.S. dollar (in which f.o.b. Caribbean sugar prices are quoted) tended to weaken sugar prices. In 1983, the U.S. dollar rose 15 percent over the British pound and 12 percent over the German mark. Another factor pressuring world sugar prices was the slow progress of talks toward a new International Sugar Agreement (ISA). The current ISA is scheduled to expire December 31, 1984. Major sugar exporters held consultations in London in January 1984~~, and~~ full negotiations were scheduled for June 1984 in Geneva.

The 100,000 tonne drop in U.S. cane sugar production in 1983 (to 2.97 million tonnes) represented nearly a 3 percent decline from 1982. The area harvested to cane sugar was 1.5 percent larger, but output was down from the preceding season because of the half-tonne decrease in overall cane yield per acre and a decline in recoverable sucrose from 10.7 to 10.4 percent. Severe winter freezes in late December reduced raw sugar yields in Florida and Texas. Sucrose recovery per tonne of cane, and sugar production, declined in all states except Hawaii.

The 1983/84 U.S. cane crop for processing totaled 28.5 million tonnes, about the same as the previous season. A decline in cane yield to 39.1 tonnes an acre largely offset the increase in area harvested, which rose to 728,000 acres.

Falling sugar prices during 1983 and 1984 were influenced by intense competition from alternative sweeteners, notably high fructose corn syrup (HFCS). The demand for HFCS shot up in 1983 when major soft drink companies raised approval levels for HFCS use in cola drinks. The USDA projected the total 1983 demand for HFCS as close to 3.6 million tonnes, a half a million above 1982 and 1 million tons above the 1981 level. The possibility of substantial displacement of sugar by HFCS was expected to continue through 1984. At the same time, an increasing portion of the demand for soft drinks came to be concentrated in the diet (low-calorie) drinks. Sugar deliveries for the beverage industry dropped about 335,000 tonnes in 1983. Sugar use in beverages for the year totaled only 25 percent of all industrial sugar use, down from 36 percent as recently as 1980. Calendar 1983 sugar deliveries totaled 8.81 million tonnes, raw value equivalent, compared with 9.15 million in 1982. Thus, sugar usage by the beverage industry could be approximately figured at 2.20 million tonnes during 1983. Just over 2 million tons, or 57 percent of 1983 deliveries of HFCS consisted of HFCS-55, the major market for which is soft drinks. The demand for HFCS in 1984 was estimated at higher than 4 million tons. However, annual average-production capacity was estimated at only about 4.3 million tons in 1983.

In 1983/84, U.S. beet production, estimated at 2.61 million tonnes, raw value, fell almost 5 percent below 1982/83. Sugarbeet production of 21.1 million tonnes was up about 1 percent, but poor weather in several areas reduced sucrose content to a recovery of 12.3 percent per tonne, down from 13.1 the previous season. Average sugarbeet yield, however, declined 0.3 tonnes from 1982/83, and was 2.4 tonnes below 1981/1982. The 1983/84 crop was planted late in many areas largely because of a cold, wet spring, and yields never reached normal levels. Overall, sugarcane and cane sugar tonnage in 1984/85 were expected to match or possibly exceed 1983/84 levels in all three mainland states.

A new loan program for sugar processors became effective October 1, 1983, for the 1983-crop refined beet sugar, raw cane sugar, cane sirup, and edible molasses. Sugar processed between July 1, 1983, and June 30, 1984 was eligible. Processors could receive loans on raw cane and refined beet sugar at national average prices of 17.5 and 20.86 cents a pound, respectively. As of February 29, 1984, 558 million pounds of 1983-crop cane sugar had been put under loan. Of this total, 28 million had been repaid. The comparable figures for beet sugar were 1.2 billion pounds under loan and 224 million repaid.

Futures Markets

Both world (No. 11) and domestic (No. 12) sugar futures are traded on the Coffee, Sugar, & Cocoa Exchange, Inc., in New York. World raw sugar futures are actively traded on the London United Terminal Sugar Market. A white sugar futures contract is traded in Paris. A contract based on refined sugar is listed, but currently inactive, on the MidAmerica Commodity Exchange in Chicago.

World Production of Sugar (Centrifugal Sugar–Raw Value) In Thousands of Metric Tons

Crop Year	Australia Cane	Brazil Cane	China (Mainland)	Cuba Cane	Hawaii Cane	India Cane	Indonesia Cane	Philippines Cane	Poland Beet	W. Germany	United States Beet	United States Cane	USSR Beet	Mexico	France	World Total All
1973–4	2,592	6,959	2,065	5,800	944	4,949	950	2,643	1,817	2,500	2,918	1,253	9,568	2,805	3,255	80,488
1974–5	2,927	6,200	2,311	6,200	953	5,464	1,030	2,875	1,860	2,540	3,646	1,657	7,700	2,698	3,239	81,679
1976–7	3,405	7,500	2,153	6,100	938	6,043	1,068	2,753	1,801	2,734	3,534	1,519	7,350	2,696	2,974	86,263
1977–8	3,322	8.863	2,450	7,200	934	8,201	1,125	2,397	1,819	3,076	2,820	1,497	8,825	3,029	4,268	92,454
1978–9	2,978	7,740	2,558	7,500	962	7,071	1,372	2,347	1,763	2,997	2,984	1,436	9,300	3,058	4,000	91,264
1979–0	2,967	6,990	2,507	6,500	928	5,170	1,331	2,325	1,582	3,095	2,612	1,488	7,800	2,763	4,257	84,560
1980–1	3,389	8,508	3,000	7,542	951	6,542	1,338	2,373	1,134	2,988	2,857	1,547	7,196	2,518	4,262	88,466
1981–2	3,586	8,385	3,400	8,207	892	9,727	1,742	2,503	1,873	3,688	3,074	1,619	6,413	2,842	5,576	100,632
1982–3[2]	3,545	9,300	3,850	7,200	943	9,580	1,569	2,521	2,011	3,587	2,465	1,887	7,392	3,078	4,822	100,986
1983–4[1]	3,000	9,400	3,882	7,500	910	8,516	1,576	2,280	1,978	2,900	2,450	1,825	8,500	2,900	3,370	94,664
1984–5																

[1] Estimated. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.644

United States Sugar (Cane & Beet) Supply and Utilization In Thousands of Short Tons (Raw Value)

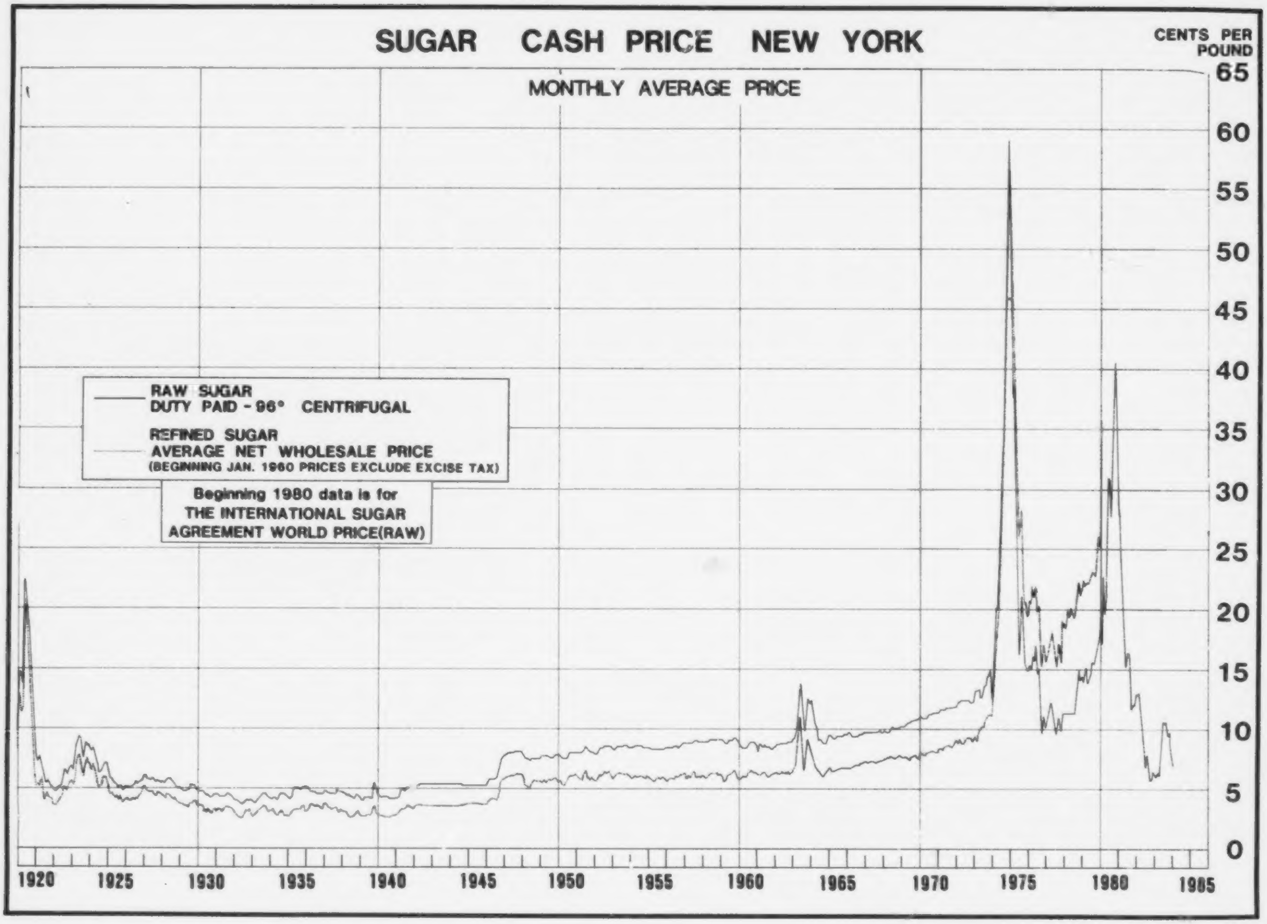
Year	Supply: Production Cane	Supply: Production Beet	Supply: Production Total	Supply: Offshore Receipts Foreign	Supply: Offshore Receipts Territories	Supply: Offshore Receipts Total	Supply: Beginning Stocks	Total Supply	Utilization: Total Use	Utilization: Exports	Utilization: Net Changes in Invisible Stocks	Utilization: Residual	Domestic Disappearance: Livestock Feed & Alcohol	Domestic Disappearance: Military & Civilian Total	Domestic Disappearance: Military & Civilian Per Capita
1972	2,481	3,534	6,015	5,459	149	5,608	2,823	14,446	11,623	50	-21	45	62	11,487	102.3
1973	2,708	3,353	6,061	5,329	79	5,408	2,823	14,292	11,646	26	91	69	31	11,429	100.8
1974	2,441	3,221	5,662	5,770	157	5,927	2,646	14,235	11,381	72	305	51	8	10,945	95.6
1975	2,827	3,473	6,300	3,882	96	3,978	2,854	13,132	10,276	216	-277	29	6	10,302	89.1
1976	2,795	4,003	6,798	4,658	203	4,861	2,856	14,515	11,017	76	-24	72	—	10,893	93.4
1977	2,666	3,423	6,089	6,138	102	6,240	3,498	15,827	11,336	22	201	14	—	11,099	94.2
1978	2,535	3,067	5,602	4,683	52	4,735	4,491	14,828	11,074	48	25	108	4	10,889	91.4
1979	2,727	3,066	5,793	5,027	47	5,074	3,754	14,621	10,921	73	11	103	—	10,756	89.3
1980	2,684	3,052	5,736	4,495	178	4,673	3,701	14,110	11,028	689	72	78	—	10,189	83.7
1981	3,043	3,182	6,225	5,025	48	5,073	3,082	14,380	10,919	1,191	94	53	—	9,769	79.5
1982[1]	2,776	3,160	5,936	2,964	80	3,044	3,461	12,441	9,373	137	23	53	—	9,160	73.8
1983[2]	3,093	2,588	5,681	3,168	67	3,235	3,068	11,983	9,413	300	141	72	—	8,900	71.0
1984[2]							2,570								

[1] Preliminary. [2] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.* T.645

Sugar Cane for Sugar & Seed and Production of Cane Sugar and Molasses in the United States

Year	Acreage Harvested 1,000 Acres	Yield of Cane per Acre Tons	Production for Sugar (1,000 Tons)	Production for Seed (1,000 Tons)	Production Total (1,000 Tons)	Farm Price $ per Ton	Farm Value of Cane used for Sugar (1,000 Dollars)	Farm Value of Cane used for Sugar & Seed (1,000 Dollars)	Sugar Production Raw Value Total 1,000 Tons	Sugar Production Raw Value Per Ton of Cane Lbs.	Sugar Production Refined Basis 1,000 Tons	Molasses Made Blackstrap (80° Brix) (1,000 Gallons)	Molasses Made Edible (1,000 Gallons)	Molasses Made Total (1,000 Gallons)
1972	702	40.4	27,239	1,093	28,332	12.64	201,639	211,724	2,740	201	2,561	178,263	2,290	180,553
1973	741	34.9	24,924	903	25,827	21.97	319,503	333,061	2,549	204	2,383	164,001	1,926	167,486
1974	734	33.8	23,721	1,091	25,140	49.64	1,166,809	1,221,232	2,512	209	2,347	152,682	1,559	156,355
1975	774	36.6	27,306	1,038	28,344	19.60	586,622	607,895	2,934	215	2,743	177,428	2,114	178,988
1976	747	37.6	26,919	1,201	28,120	13.70	408,403	425,342	2,724	202	2,545	179,180	2,574	180,730
1977	759	35.3	25,730	1,100	26,830	18.50	454,217	474,257	2,684	209	2,508		2,538	164,894
1978	744	35.0	24,821	1,176	25,997	19.40	483,905	507,069	2,612	210	2,441		2,750	161,810
1979	733	36.2	25,410	1,122	26,532	26.00	661,212	690,544	2,700	213	2,524		2,900	164,581
1980	733	36.8	25,582	1,381	26,963	38.50	984,559	1,035,990	2,728	213	2,550		1,900	163,341
1981	755	36.3	26,165	1,243	27,408	24.90	650,721	681,983	2,833	217	2,647		2,100	182,656
1982[1]	759	39.2	28,433	1,337	29,770	26.50	754,587	789,896	3,063	215	2,863		1,550	177,041
1983	766	38.7	28,500	1,138	29,643				2,970		2,776			177,680
1984														

[1] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.* T.646



Raw Sugar N.Y. Spot Price (C.I.F., Duty/Fee Paid, Contract #12) In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	9.10	9.02	9.16	8.89	8.76	8.77	9.17	9.33	9.39	9.32	9.03	9.19	9.09
1973	9.38	9.14	9.45	9.65	10.06	10.25	10.25	10.75	10.97	11.15	11.10	11.34	10.29
1974	12.63	17.09	18.11	19.25	23.05	26.30	28.35	32.60	33.71	38.83	57.30	46.74	29.50
1975	37.5	38.8	30.0	28.2	19.5	14.8	19.4	22.5	17.5	15.2	15.5	15.6	22.9
1976	15.4	15.0	16.4	15.6	16.7	14.4	15.0	11.9	9.5	11.2	10.6	10.2	13.5
1977	10.5	11.3	11.7	12.4	11.2	10.0	9.5	11.0	10.8	9.8	11.4	11.4	10.9
1978	11.4	11.4	11.4	11.4	11.4	11.4	11.4	13.5	14.4	15.0	14.2	14.5	14.3
1979	13.8	15.0	15.3	13.9	14.1	14.6	15.7	15.4	15.7	15.9	16.2	18.0	15.3
1980[1]	19.66	24.69	21.18	22.67	31.89	32.10	28.75	33.14	36.03	41.70	39.28	30.29	30.12
1981	29.57	26.07	23.81	19.91	17.43	18.95	19.10	17.42	15.49	15.66	16.28	17.07	19.73
1982	18.16	17.77	17.13	17.89	19.57	21.03	22.15	22.45	20.88	20.44	20.79	20.83	19.92
1983	21.23	21.76	21.86	22.43	22.60	22.54	22.09	22.55	22.20	21.94	21.83	21.47	22.04
1984	21.51	21.90	22.00	22.03									
1985													

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[1] Prices prior to 1980 are for raw cane (96°), duty paid C.I.F. New York. *Sources: Economic Research Service, U.S.D.A.; N.Y. Coffee & Sugar Exchange*

T.648

Sugar, Refined—Deliveries by Type of Product of Buyer in the U.S. In Thousands of Short Tons

Year	Bakery & Cereal Pdts.	Beverages	Confectionery[3]	Institutions	Dairy Products	Processed Foods	Other Food Uses	Retail Grocers[4]	Wholesale Grocers[5]	Other Uses[6]	Total Deliveries	In Consumer Size Pckgs.	To Industrial Users
1975	1,242	2,074	796	158	511	741	486	1,261	1,919	85	9,273	2,409	771
1976	1,313	2,252	914	198	552	737	519	1,314	2,143	101	10,043	2,439	1,018
1977	1,387	2,454	951	217	567	745	543	1,288	2,095	104	10,351	2,460	923
1978[4]	1,308	2,608	912	230	531	689	412	1,180	1,996	161	10,027	2,267	909
1979[4]	1,289	2,441	911	276	480	681	483	1,239	2,038	126	9,934	2,410	867
1980[4]	1,337	2,161	932	303	450	535	589	1,169	1,881	120	9,477	2,347	703
1981[4]	1,306	1,852	983	259	459	484	581	1,161	2,001	126	9,212	2,425	737
1982	1,296	1,583	940	177	404	450	526	1,086	1,951	106	8,519	2,310	727
1983[1]	1,387	1,248	1,087	195	385	454	431	1,168	1,713	131	8,199	2,314	567

[1] Preliminary. [2] Used largely for pharmaceuticals & some tobacco. [3] And related products. [4] Chain stores, supermarkets. [5] Jobbers, sugar dealers. *Source: Stat. Rep. Serv., U.S.D.A.* T.649

World Stocks of Centrifugal Sugar as of Sept. 1 In Thousands Metric Tons[2] (Raw Value)

Sugar-Making Season	Australia	Brazil	France	W. Germany	India	Italy	Japan	Mexico	Netherlands	Philippines	Sweden	Iran	United Kingdom	Ins. Areas	Total
1971–2	475	1,430	1,021	861	1,554	263	493	486	43	251	86	550	543	1,450	12,190
1972–3	279	1,377	1,080	941	659	287	591	334	72	62	160	578	841	1,204	11,136
1973–4[3]	253	1,249	980	854	598	260	536	303	65	56	145	524	763	1,092	10,101
1974–5	408	791	143	757	657	357	259	327	50	152	157	385	629	1,135	8,368
1975–6	155	1,591	269	137	843	500	267	547	96	405	139	191	208	2,444	9,902
1976–7	328	1,746	174	165	737	337	98	642	139	744	138	207	139	2,399	10,574
1977–8	534	1,286	706	202	732	562	104	198	199	1,607	127	304	253	2,718	12,820
1978–9	383	1,516	947	305	1,448	859	350	134	207	1,290	140	364	234	3,375	15,843
1979–0	687	3,008	962	537	1,934	758	421	138	222	1,214	108	354	455	3,549	19,122
1980–1	555	1,959	899	535	386	833	497	192	196	727	93	325	625	2,904	14,353
1981–2	499	2,234	415	300	706	663	212	167	181	158	75	275	706	2,508	12,322
1982–3[1]	672	1,955	1,092	458	3,144	880	341	91	243	269	91	280	828	2,783	17,275

[1] Preliminary. [2] Data prior to 1973–74 are in THOUSANDS OF SHORT TONS. *Source: Foreign Agricultural Service, U.S.D.A.* T.650

U.S. Sugar Beets, Beet Sugar, Pulp, & Molasses Produced from Sugar Beets & Raw Sugar Spot Prices

Year of Harvest	Sugar Beets						Sugar Production		Raw Sugar Prices			Sugar Act Beet Payments $ Per Ton
	Acreage Planted — 1,000 Acres —	Acreage Harv. — 1,000 Acres —	Yield Per Har. Acre Tons	Production 1,000 Tons	Price[1] Dollars	Farm Value $1,000	Refined Basis — 1,000 Sh. Tons —	Equivalent "Raw Value"[2] — 1,000 Sh. Tons —	Intern.[4] Agreem. — Cents Per Lb. —	Cof., Sugar Exch. World — Cents Per Lb. —	Cof., Sugar Exch. N.Y. Duty Paid — Cents Per Lb. —	
1973	1,280	1,218	20.1	24,499	29.60	725,661	2,990	3,200	9.45	9.61	10.29	2.08
1974	1,252	1,213	18.2	22,123	46.80	1,035,567	2,725	2,916	29.66	29.99	29.50	2.06
1975	1,595	1,517	19.6	29,704	27.60	820,743	3,756	4,019	20.37	20.49	22.47	
1976	1,525	1,479	19.9	29,386	21.00	616,813	3,640	3,895	11.51	11.58	13.31	
1977	1,273	1,216	20.6	25,007	24.20	604,399	2,905	3,108	8.10	8.11	11.00	
1978	1,305	1,269	20.3	25,788	25.20	649,846	3,074	3,289	7.81	7.82	13.93	
1979	1,161	1,120	19.6	21,996	33.90	745,273	2,691	2,879	9.65	9.66	15.56	
1980	1,231	1,190	19.8	23,502	47.20	1,108,974	2,943	3,149	28.66	29.02	30.11	
1981	1,252	1,228	22.4	27,538	29.20	803,569	3,166	3,388	16.89	16.93	19.73	
1982	1,054	1,027	20.3	20,894	35.40	740,342	2,558	2,737	8.40	8.42	19.92	
1983[3]	1,081	1,055	20.0	21,111			2,435	2,605	8.46	8.49	22.04	

[1] Includes support payments, but excludes Sugar beet payments. [2] Refined sugar multiplied by factor of 1.07. [3] Preliminary. [4] International Sugar Agreement, World Price. *Source: Statistical Reporting Service, U.S.D.A.* T.647

United States Production & Imports of Edible Sirups In Thousands of Gallons

	Production[2]								Imports				
	Sirups												
Year	Corn	Cane	Sorghum	Maple	Refiners'	Edible Molasses	Honey	Total	Maple Sirup	Edib. Molas. & Cane Sirup	Honey	Shipm. From Terr.	Total
1971	304,000	—	—	962	1,883	2,517	16,708	326,070	577	2,333	967	—	3,877
1972	387,880	—	—	1,099	2,077	2,290	18,210	411,556	710[1]	1,623	3,291	—	5,624
1973	451,264	—	—	857	2,309	1,926	20,193	476,549	803	2,857	900	—	4,560
1974	498,313	—	—	1,087	2,564	1,559	15,866	519,389	801	2,469	2,196	—	5,466
1975	561,215	—	—	1,207	2,482	2,114	16,823	583,841	607	2,483	3,917	—	7,007
1976	615,498	—	—	927	2,403	2,574	16,756	638,158	886	3,188	5,608	—	9,682
1977	695,196	—	—	1,221	2,197	2,538	15,076	716,228	867	1,773	5,396	—	8,036
1978	751,809	—	—	1,154	2,571	2,750	19,466	777,750	811	2,077	4,727	—	7,615
1979	845,741	—	—	1,219	2,524	2,900	20,160	872,544	857	2,944	4,948	—	8,749
1980	941,056	—	—	973	1,983	1,900	16,871	962,783	855	3,422	4,143	—	8,420
1981	1,073,933	—	—	1,410	1,446	2,100	15,703	1,094,592	1,046	2,040	6,530	—	9,616
1982[1]	1,212,759	—	—	1,292	1,003	1,550	18,666	1,235,230	1,154	2,566	7,767	—	11,487
1983													

[1] Preliminary. [2] Production of cane sirup, sorghum sirup, & edible molasses is of the fall of the preceding year. *Source: Agricultural Marketing Service, U.S.D.A.* T.652

U.S. Exports & Domestic Consumption of Edible Sirups, Corn Sugar & Sugar In Thousands of Gallons

	Exports			Indicated Domestic Consumption					Per Capita Consumption in Pounds						Total Sugar Consumption
				Sirups								Sugar			
Year	Corn Sirup	Honey	Total	Corn	Maple	Cane & Refin. & Edib. Mol.	Honey	Total	Corn Sweeteners[2]	Corn Sugar	Saccharin	U.S. Grown	Cane	Total	Mil. Tons
1971	1,324	639	1,964	302,676	1,539	6,870	17,035	328,120	20.8	5.0	5.1	53.5	71.5	102.1	11.3
1972	1,205	346	1,551	386,675	1,809	6,061	21,155	415,700	21.1	4.8	5.1	55.6	72.0	102.3	11.5
1973	1,377	1,485	2,861	449,887	1,660	7,170	19,609	478,326	23.4	5.2	5.1	54.9	70.6	100.8	11.4
1974	1,736	386	2,122	496,577	1,888	6,631	17,676	522,772	25.1	5.3	5.9	46.6	69.8	95.6	10.9
1975	1,070	337	1,407	560,145	1,814	7,079	20,403	588,441	27.5	5.5	6.2	54.7	59.0	89.2	10.3
1976	1,674	396	2,070	613,824	1,813	8,165	21,968	645,770	29.7	5.5	6.1	54.4	61.4	93.4	10.9
1977	1,543	466	2,009	693,653	2,088	6,508	20,006	722,255	31.2	5.5	6.6	52.7	64.4	94.2	11.1
1978	1,694	679	2,373	750,115	1,965	7,398	23,514	782,992	33.7	5.5	6.9	50.3	64.0	91.4	10.9
1979	1,207	747	1,954	844,534	2,076	8,368	24,361	879,339	36.8	5.5	7.0	47.6	62.8	89.3	10.8
1980	3,498	722	4,220	937,558	1,828	7,620	20,292	967,298	40.3	5.5	7.1	51.2	56.8	83.6	10.2
1981	2,916	777	3,693	1,071,017	2,456	5,586	21,456	1,100,515	44.5		7.2	50.0	53.9	79.4	9.8
1982[1]	791	721	1,512	1,211,968	2,446	5,119	25,712	1,245,245	48.2		7.3	50.9	48.6	73.8	9.2
1983[1]									51.6		7.2	47.8	48.0	71.0	8.9
1984															

[1] Preliminary. [2] Corn Syrup & Dextrose. *Source: Agricultural Marketing Service, U.S.D.A.* T.653

Sugar Deliveries and Stocks in the United States In Thousands of Short Tons, Raw Value

	Deliveries by Primary Distributors							Stocks (January 1)					
Year	Cane[1] Sugar Refineries	Beet Sugar Factories	Importers of Direct Consumption Sugar	Cane Sugar Mills[1]	Total	Sales of Refined Sugar For Export	Total Domestic Consumption[2]	Cane Sugar Refineries	Beet Sugar Factories	Importers of Direct-Consumption	Refiners' Raws	Mainland Cane Mills	Total
1971	7,306	3,213	111	51	10,681	89	11,345	237	1,266	4	804	376	2,792
1972	7,326	3,281	87	70	10,764	50	11,487	255	1,258	1	785	116	2,710
1973	7,334	3,282	75	81	10,772	26	11,429	233	1,280	3	972	100	2,583
1974	7,590	2,826	56	54	10,526	28	10,946	257	1,130	1	998	412	2,799
1975	6,237	3,068	83	65	9,453	147	9,304	295	1,314	1	886	211	2,799
1976	7,079	3,815	76	15	10,197	68	10,895	250	1,490	0	428	458	2,731
1977	7,738	3,509	172	17	10,495	35	11,248	279	1,661	0	776	509	3,341
1978	7,691	3,198	180	18	10,174	48	10,889	286	1,691	91	964	556	3,588
1979	7,565	3,191	84	18	10,069	73	10,756	257	1,560	0	510	641	2,968
1980	7,024	3,165	7	45	9,933	689	10,189	315	1,205	0	691	1,068	3,279
1981	6,617	3,151	17	24	10,207	1,191	9,769	272	1,286	0	832	658	3,048
1982	6,127	3,026	46	24			9,153	272	1,296	0	844	931	3,344
1983[3]	5,910	2,902					8,812	262	1,417	0	510	701	2,897
1984[3]								225	1,103	0	528	592	2,448

[1] Sugar for direct consumption only. [2] Includes deliveries for U.S. military forces at home and abroad. [3] Preliminary. *Source: Department of Agriculture* T.654

Centrifugal Sugar (Raw Value) Imported into Selected Countries In Thousands of Metric Tons

Year	Algeria	Canada	Chile	France	W. Germany	Israel	Japan	Malaysia	Morocco	Nigeria	Iran	Un. Kingdom	China	United States	USSR	World Total[2]
1974	277	901	174	158	100	157	2,771	352	278		226	2,269	411	5,238	1,856	21,860
1975	360	998	178	182	196	150	2,473	345	268		626	2,346	241	3,490	3,327	20,508
1976	354	895	98	136	169	131	2,439	336	263		626	2,101	638	4,136	3,760	22,593
1977	431	1,064	342	110	108	153	2,708	336	389	329	277	1,870	1,676	5,290	4,776	25,949
1978	437	1,030	317	117	152	195	2,284	398	294	595	875	1,689	1,438	3,616	3,993	23,843
1979	513	1,010	294	103	146	256	2,605	418	279	530	746	1,424	985	4,437	4,080	24,827
1980	569	859	433	69	150	119	2,265	510	332	709	785	1,404	946	3,802	4,981	26,480
1981[1]	589	850	86	134	118	205	1,591	464	313	971	698	1,365	1,186	4,646	5,204	27,757
1982[1]															7,350	28,130

[1] Preliminary. [2] Excludes U.S. trade with Territories. *Source: Foreign Agricultural Service, U.S D.A.* T.655

Centrifugal Sugar (Raw Value) Exported from Selected Countries In Thousands of Metric Tons

Year	Australia	Brazil	Czechoslovakia	Cuba	Dom. Republic	France	Thailand	Mauritius	Peru	Philippines	South Africa	Taiwan	Un. Kingdom	USSR	World Total[2]
1974	1,759	2,357	189	5,491	1,055	1,202	444	726	462	1,542	779	553	328	103	23,160
1975	1,969	1,746	227	5,744	975	994	595	498	422	972	809	409	385	59	21,112
1976	2,016	1,252	71	5,764	977	1,422	1,124	584	284	1,467	860	519	285	79	22,818
1977	2,558	2,518	171	6,238	1,101	1,816	1,657	637	434	2,443	1,384	599	178	87	28,271
1978	2,482	2,005	306	7,231	901	2,357	1,040	579	275	1,142	719	365	93	174	26,088
1979	2,002	1,860	242	7,269	986	2,347	1,190	641	181	1,150	884	387	76	244	26,373
1980	2,410	2,615	186	6,191	794	2,750	479	655	53	1,745	785	403	100	164	27,290
1981[1]	2,982	2,765	213	7,071	864	2,778	—	459	—	1,241	737	287	129	183	28,071
1982															

[1] Preliminary. [2] Excludes U.S. trade with Territories. *Source: Agricultural Marketing Service, U.S.D.A.* T.656

Spot Raw Sugar International Sugar Agreement World Price[1] In Cents per Pound

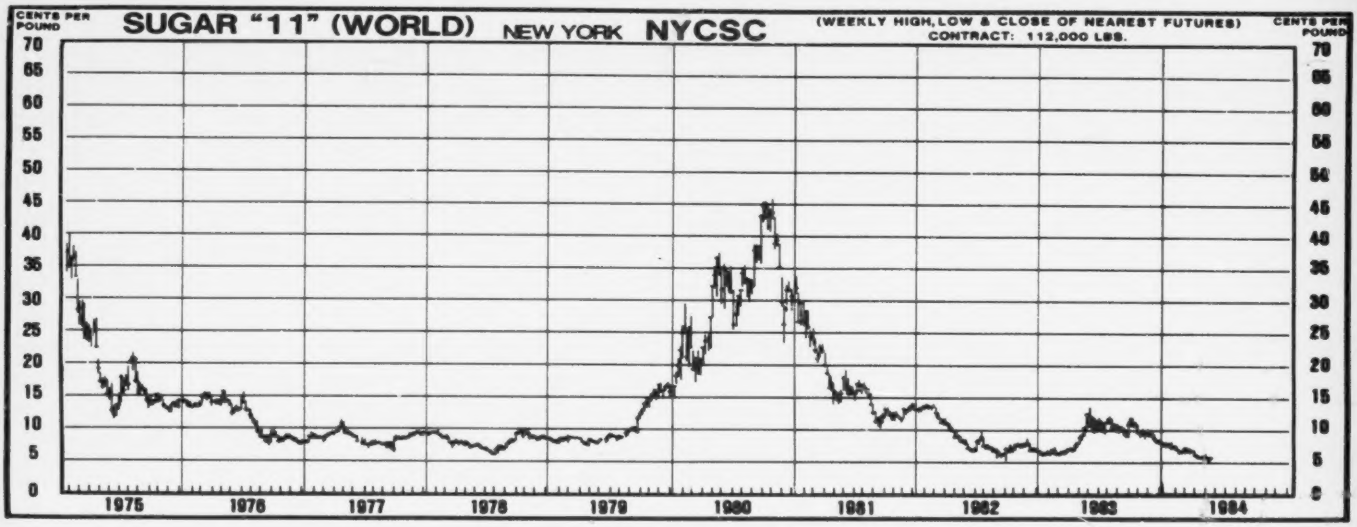
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	14.3	16.1	20.0	20.0	24.8	28.5	31.9	33.8	39.5	40.8	54.9	59.2	32.0
1975	51.8	47.9	41.0	36.1	31.9	25.9	26.8	28.3	23.2	20.5	20.7	19.4	31.1
1976	20.9	20.3	22.1	21.0	22.2	19.7	20.4	17.1	15.2	17.2	16.0	15.6	19.0
1977	16.0	16.7	17.1	18.1	17.2	15.7	15.1	17.2	16.5	15.5	19.1	18.5	16.9
1978	18.7	20.1	19.3	20.1	20.0	19.8	19.1	20.5	21.3	22.3	21.4	22.0	20.4
1979[1]	7.57	8.23	8.46	7.82	7.85	8.14	8.52	8.85	9.90	11.94	13.68	14.93	9.65
1980	17.16	22.69	19.64	21.24	30.94	30.80	27.70	31.77	34.89	40.53	37.81	28.79	28.66
1981	27.78	24.09	21.81	17.83	15.06	16.38	16.34	14.76	11.65	12.04	11.97	12.98	16.89
1982	12.90	13.07	11.26	9.58	8.11	6.84	7.80	6.77	5.76	5.93	6.52	6.31	8.40
1983	6.03	6.43	6.20	6.71	9.24	10.74	10.53	10.56	9.43	9.69	8.33	7.67	8.46
1984[2]	6.97												

[1] Prices prior to 1979 are for refined cane at N.Y. (excluding excise tax). [2] Preliminary. *Source: Sugar Division, Commodity Stabilization Service* T.657

Average Refined Cane Sugar[1] (Wholesale)—Northeast In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	15.65	18.49	20.90	23.78	27.61	31.04	32.50	36.83	40.74	43.59	60.69	60.41	34.35
1975	52.95	48.96	40.50	37.01	32.23	25.57	26.89	27.05	23.30	21.15	20.84	20.53	31.42
1976	21.31	20.86	22.20	21.41	21.87	20.22	20.46	17.04	15.85	16.90	16.28	15.97	19.20
1977	16.70	16.94	17.45	18.52	17.52	16.40	16.13	17.38	16.57	16.35	18.50	18.88	17.28
1978	19.85	20.54	20.03	20.18	20.31	20.13	19.90	20.70	21.83	22.65	22.05	22.27	20.87
1979	22.27	22.44	22.54	22.35	22.53	22.71	22.96	23.79	23.50	23.34	23.48	26.47	23.20
1980	27.51	35.00	29.48	31.55	41.96	43.53	39.92	44.15	48.05	55.06	52.84	42.86	40.99
1981	41.80	37.47	35.51	31.42	27.90	29.74	29.96	28.79	25.08	25.99	27.10	27.40	30.68
1982	27.5	27.8	26.9	27.7	29.3	30.7	32.0	32.5	31.9	30.9	30.7	31.0	29.9
1983	31.3	32.0	31.5	31.9	32.0	32.5	32.5	32.5	32.5	32.0	31.5	31.5	32.0
1984	31.5												

[1] These are f.o.b. basis prices in 100-lb. paper bags, not delivered prices. To obtain delivered prices, add freight "prepays" & deduct discounts & allowances. *Source: Economies & Statistics Service, U.S.D.A.* T.658



Month-End Open Interest of World Sugar (#11) Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	41,918	32,736	30,260	31,558	34,902	34,186	35,419	34,381	30,702	31,290	30,439	31,498
1979	35,004	34,529	36,200	31,824	36,521	39,646	44,938	58,184	61,442	73,701	87,182	92,007
1980	103,041	87,843	68,667	61,126	69,666	68,554	68,996	70,993	71,316	79,313	76,754	64,740
1981	61,522	57,087	59,025	54,898	62,330	61,022	66,730	64,604	52,740	60,761	66,399	72,326
1982	76,623	60,990	65,457	57,719	61,332	51,267	54,706	51,737	42,363	50,682	61,916	64,406
1983	78,889	76,429	83,851	88,011	99,100	94,091	94,216	94,245	80,360	81,261	83,302	84,059
1984	81,806	73,634	92,503	84,925								

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y. T.660

United States Deliveries[1] of All Sugar by Primary Distributors In Thousands of Short Tons, Raw Value

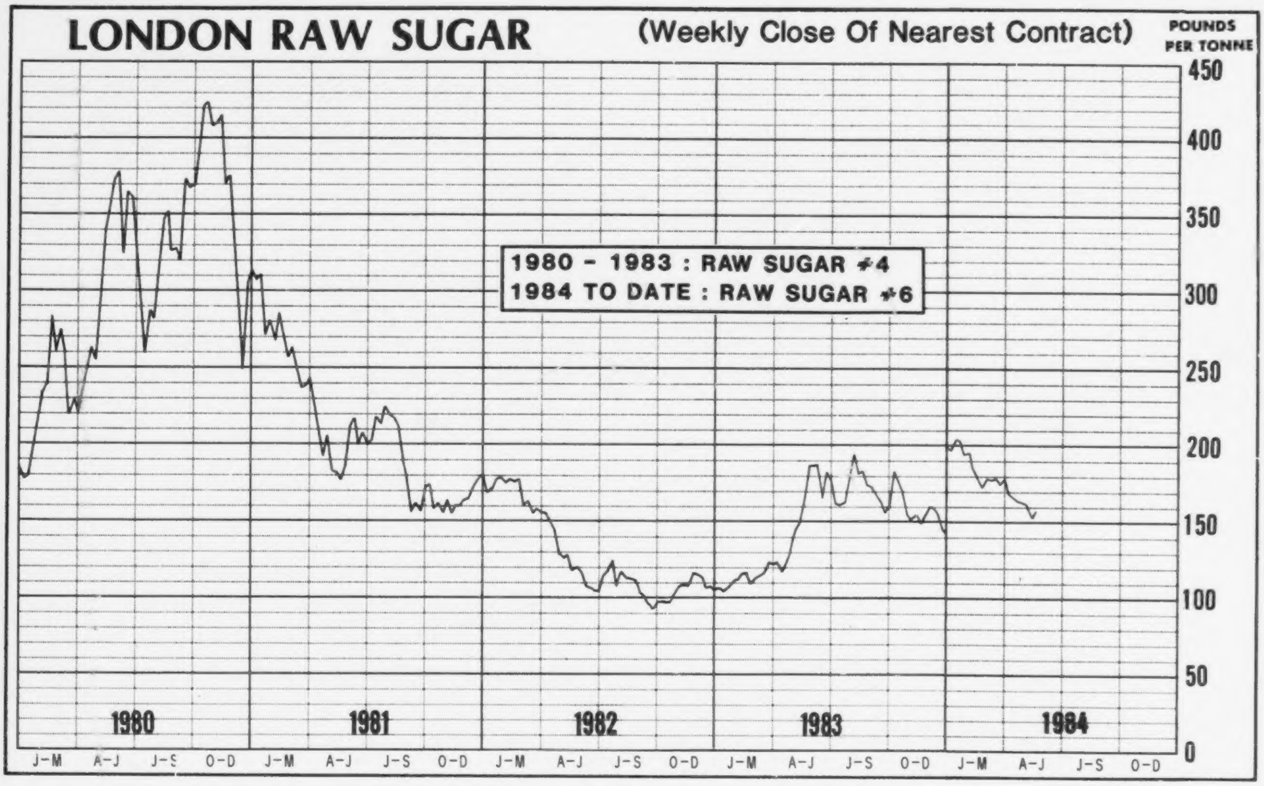
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	838	774	964	811	893	947	923	1,103	860	924	879	840	10,756
1980	794	848	866	772	943	882	910	904	909	825	717	818	10,189
1981		2,217			2,522			2,726			2,303		9,769
1982		2,083			2,418			2,400			2,252		9,153
1983[2]		2,078			2,195			2,350			2,189		8,812
1984													

[1] Includes for domestic consumption and for export. [2] Preliminary. *Source: Department of Agriculture* T.659

Volume of Trading of World Sugar (#11) Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	61,854	70,103	86,634	79,359	65,623	98,323	75,940	116,271	115,808	99,632	75,243	71,983	1,016,773
1979	72,961	107,951	76,267	82,804	64,224	132,200	121,474	142,006	192,220	255,858	278,458	256,919	1,783,342
1980	381,805	354,441	338,118	245,233	309,417	277,846	271,884	279,149	317,170	295,673	250,627	255,379	3,576,702
1981	233,217	237,286	212,519	240,420	212,708	241,736	192,142	203,404	247,160	138,529	137,768	183,438	2,470,327
1982	166,913	209,386	199,263	217,689	138,377	177,657	176,641	144,980	151,639	140,262	160,656	154,657	2,037,020
1983	207,678	249,392	198,034	261,939	396,435	393,267	272,150	329,129	283,827	214,897	231,757	160,436	3,201,941
1984	192,451	205,499	199,280	227,150									

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y. T.661



LONDON RAW SUGAR (Weekly Close Of Nearest Contract)

High, Low & Closing Prices of March World Sugar (#11) At New York In Cents per Pound

Year of Delivery		Year Prior to Delivery													Delivery Year		Life of Delivery Range
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	
1979	High	11.03	11.03	10.67	10.18	9.53	9.11	8.95	7.70	8.14	9.38	9.88	9.38	9.04	8.58	8.74	11.03
	Low	10.56	10.56	10.10	8.64	8.78	8.32	7.72	6.55	6.89	8.22	8.70	8.37	8.27	7.91	7.94	6.55
	Close	10.90	10.68	10.13	9.43	9.04	8.72	7.75	6.90	8.11	9.23	9.42	8.48	8.43	8.22	8.12	—
1980	High	10.27	9.94	10.30	10.15	9.74	9.72	10.14	10.58	10.91	12.10	14.64	16.91	17.40	22.05	29.45	29.45
	Low	9.76	9.44	9.71	9.55	9.12	9.20	9.29	9.74	9.94	10.50	11.56	14.16	14.85	15.10	19.75	9.12
	Close	9.86	9.75	10.09	9.74	9.45	9.38	9.96	10.07	10.69	11.56	14.08	16.86	16.31	22.01	23.20	—
1981	High	17.06	22.42	28.50	30.08	28.00	39.45	39.38	38.35	37.30	42.20	45.05	45.75	33.75	33.85	28.60	45.75
	Low	15.50	15.56	22.35	21.70	22.60	28.00	33.30	28.17	32.40	33.90	40.85	35.05	24.50	26.15	23.00	13.75
	Close	16.41	22.38	27.37	23.53	27.20	37.94	38.34	32.25	35.07	41.16	43.34	35.11	30.58	26.79	23.25	—
1982	High	28.20	27.68	26.18	22.20	20.30	17.85	19.00	17.95	16.80	13.60	13.36	13.28	14.06	14.10	13.98	36.60
	Low	23.75	23.85	22.10	19.35	16.65	15.40	16.05	15.85	13.25	11.75	11.50	11.67	12.52	12.64	12.23	11.50
	Close	25.68	24.50	22.13	20.08	17.43	17.85	16.05	16.98	13.26	13.11	12.52	13.01	13.18	13.58	12.63	—
1983	High	15.15	15.25	15.05	13.68	12.51	10.50	9.35	10.74	8.97	8.22	7.85	8.33	8.28	6.84	7.34	15.25
	Low	13.98	14.03	13.49	12.18	10.28	9.24	8.28	8.37	7.83	7.05	6.60	7.27	6.80	6.05	6.08	6.05
	Close	14.71	14.90	13.65	12.49	10.52	9.25	9.33	8.78	7.96	7.11	7.84	8.32	6.85	6.20	6.28	—
1984	High	9.95	8.92	9.45	9.00	9.77	14.48	13.50	13.16	13.44	11.96	11.94	10.10	9.62	8.29	7.66	14.48
	Low	8.75	8.48	8.11	8.08	8.72	9.60	11.33	10.84	11.60	10.98	9.33	8.82	7.99	7.26	5.65	5.65
	Close	8.98	8.62	8.17	9.00	9.64	14.48	12.52	12.79	11.63	10.94	9.36	9.57	8.18	7.50	5.73	—
1985	High	11.50	10.25	9.60	9.44	9.12											
	Low	10.06	9.38	8.63	8.74	8.28											
	Close	10.16	9.56	8.75	9.04	8.40											

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y.

T.662

Sulfur

World mine production of sulfur in 1983 was only slightly below that of 1982, according to preliminary data of the U.S. Bureau of Mines. U.S. production of elemental sulfur, both Frasch and recovered, totaled 8.11 million metric tons in 1983, a reduction of 6 percent from 1982 output.

Apparent domestic consumption of sulfur in 1983 was 10 percent above the 8.89 million tonnes used in 1982. Sulfur shipped for domestic consumption was obtained mainly from domestic sources: recovered—41 percent, Frasch—32 percent; combined coproduct sulfuric acid, pyrites, hydrogen sulfide, and sulfur dioxide—10 percent. About 85 percent of the sulfur was converted to sulfuric acid prior to end use. Agricultural chemicals accounted for an estimated 65 percent of sulfur demand; organic and inorganic chemicals and other chemical products—9 percent; petroleum refining—9 percent; metal mining—5 percent; miscellaneous uses—12 percent.

U.S. imports of Frasch and recovered sulfur in 1983 were 1.69 million tonnes, 12 percent less than 1982 imports. Exports of sulfur for 1983 were 0.99 million tonnes, up 3 percent from a year earlier. The U.S. remained a net importer of sulfur for the 7th consecutive year.

From a 1981 base, U.S. demand for sulfur is expected to increase at an annual rate of about 3 percent through 1990. Tests being conducted on sulfur-asphalt paving and sulfur concretes are expected to lead to increased demand for sulfur in these areas. There are no adequate substitutes for sulfur at present or anticipated price levels.

Producers' stocks of sulfur in the U.S. at the end of December 1983 amounted to 3.22 million tonnes, 23 percent lower than a year earlier.

World Production of Elemental Sulfur (Native & Other Elemental [All Forms]) In Thous. of Metric Tons

Year	Argentina	Spain	Chile	China	France[3]	W. Germany	Canada	Italy	Japan	Mexico	Poland	USSR	Israel	Turkey	United States	World Total
1977	47	1,235	61	1,752	2,217	1,602	7,483	666	2,825	1,936	5,150	9,740	10	118	10,727	52,341
1978	38	1,176	53	1,900	2,223	1,601	7,247	684	2,728	1,918	5,421	9,240	10	122	11,175	52,138
1979	20	1,224	104	2,000	2,288	1,650	7,027	571	2,891	2,125	5,195	9,240	10	114	12,101	53,184
1980	N.A.	1,236	115	2,200	2,216	1,799	7,260	604	2,784	2,217	5,535	9,590	10	121	11,866	55,009
1981[1]	10	1,268	143	2,300	2,042	1,742	6,799	544	2,573	2,178	5,123	9,790	10	119	12,145	53,563
1982[2]	10	1,238	135	2,300	2,101	1,785	6,264	488	2,476	1,916	5,270	9,990	10	125	9,787	50,600
1983[2]		1,000			2,000	1,600	6,500	500	2,500	1,700					9,000	50,000

[1] Preliminary. [2] Estimate. [3] Content of ore. *Source: Bureau of Mines* T.663

Salient Statistics of Sulfur in the United States In Thousands of Metric Tons of Sulfur Content

	Production of								Imports—Pyrites & Sulfur	Producers' Stocks Dec. 31[4]	Exports (Sulfur)	Apparent Consumption (All Forms)	Value $ Metric Ton Elem. Sulfur F.O.B. Mine/Plant
	Native Sulfur[2]												
		Mines											
Year	Frasch-Process Total	Louisiana	Texas	Recovered Elemental Brimstone	Pyrites (Includ. Coal Brasses)	By-product Sulfuric Acid[3]	Other Sulf. Acid Compounds	Production (All Forms)					
1977	5,915	2,461	3,454	3,624	169	960	59	10,727	2,009	5,557	1,088	11,657	44.38
1978	5,648	1,928	3,720	4,062	301	1,103	61	11,175	2,177	5,345	827	12,600	45.17
1979	6,357	2,460	3,897	4,070	400	1,167	107	12,101	2,494	4,239	1,963	13,739	55.75
1980	6,390	2,309	4,081	4,073	322	1,003	78	11,866	2,523	3,094	1,673	13,659	89.06
1981	6,348	2,440	3,908	4,259	307	1,159	72	12,145	2,522	3,634	1,392	12,785	111.48
1982[1]	4,210	1,312	2,898	4,404	265	828	80	9,787	1,905	4,202	961	10,059	108.27
1983[5]	3,202			4,907				9,000	1,695	3,220	992	10,650	98.00

[1] Preliminary. [2] Or sulfur ore. [3] Basis 100%—produced at Cu, Zn, & Pb plants. [4] Frasch & recovered sulfur. [5] Estimates. *Source: Bureau of Mines* T.664

Sulfur Consumption & Foreign Trade of the United States In Thousands of Metric Tons

		Apparent Consumption of Sulfur in All Forms[3]									Foreign Trade			
											Exports		Imports	
Year	Net Import Reliance as a % of Apparent Consumption	Native Sulfur (Frasch)	Recovered Sulfur Sales	Total Pyrites	Smelter Acid Prod.	Other Prod.[2]	Total	Imports of Recovered Sulfur	Sales to Consumers of Native Sulfur	Imports of Native Sulfur	Quantity	Value Ths. $	Quantity	Value Ths. $
1977	6	5,723	3,627	169	960	59	11,657	1,228	6,030	781	1,088	52,111	2,009	65,154
1978	12	5,902	4,088	301	1,103	61	12,600	1,185	5,736	993	827	34,667	2,177	75,671
1979	11	6,773	4,108	400	1,167	107	13,739	1,265	7,507	1,229	1,963	142,966	2,494	94,147
1980	14	6,717	4,115	322	1,003	78	13,659	1,533	7,400	990	1,673	185,866	2,523	138,852
1981	5	5,550	4,207	307	1,159	72	12,785	1,666	5,910	856	1,392	187,407	2,522	209,766
1982[1]	4	3,557	4,344	265	828	80	10,059	1,215	3,598	690	961	122,143	1,905	164,885
1983[4]	16						10,650				992	109,298	1,695	129,110

[1] Preliminary. [2] Includes hydrogen sulfide, liquid sulfur dioxide. [3] Crude sulfur equivalent. [4] Estimate. *Source: Bureau of Mines* T.665

Sunflowerseed and Oil

World sunflowerseed production for the 1983/84 season was forecast by the USDA in early April 1984 at 15.9 million metric tons, nearly 4 percent below estimated 1982/83 output, primarily because of a sharp reduction in the 1983 U.S. crop which more than offset increases elsewhere. The Soviet Union accounted for one-third of estimated production, and Argentina displaced the U.S. as the second largest producer.

Global sunflowerseed exports were expected to total 1.55 million tonnes, down from 1.93 million in 1982/83. The U.S. continues to dominate world exports of sunflowerseed, but has lost ground to France, the EC's major producer. Argentina exports little sunflowerseed, but dominates sunflowerseed product exports—particularly to the EC.

World sunflowerseed meal production in 1983/84 was estimated by the USDA at 6.59 million tonnes versus an estimated 6.58 million in 1982/83. Exports were estimated at 1.08 million tonnes versus 1.11 million in 1982/83, and consumption at 6.63 million tonnes versus 6.51 million. Ending stocks were projected at 170,000 tonnes versus 174,000 at the end of the 1982/83 season. World trade in sunflowerseed meal is dominated by Argentina. The USSR is the largest producer, but consumes all that it produces.

Sunflowerseed oil production, worldwide, was estimated at 5.81 million metric tons for the 1983/84 season by the USDA in April 1984, compared with 5.83 million tonnes in 1982/83. World consumption was estimated at 5.70 million tonnes, versus 5.57 million, and exports at 1.48 million tonnes versus 1.53 million in 1982/83. Argentina was expected to account for nearly one-half of world sunflowerseed oil exports in 1983/84. Ending stocks were expected to drop to 185,000 tonnes from 250,000 a year earlier.

U.S. sunflowerseed production in 1983 dropped to 1.44 million tonnes, 40 percent below the 1982 crop, because of reduced acreage and poor yields. Exports have exceeded domestic use during all years for which records have been kept.

The USDA estimated 1983/84 U.S. sunflowerseed oil production at 272,000 metric tones, domestic use at 40,000, and exports at 240,000 tonnes versus 43,000 and 229,000 tonnes, respectively, in 1982/83. Ending stocks of oil were estimated at 35,000 tonnes versus 43,000 a year earlier.

Sunflowerseed meal production in the U.S. during the 1983/84 season was estimated at 400,000 tonnes versus 434,000 in 1982/83, all of which was used domestically.

Futures Market

Sunflowerseed futures are listed but inactive on the Minneapolis Grain Exchange.

World Production of Sunflowerseed In Thousands of Metric Tons

Crop Year	Argentina	Australia	Bulgaria	Canada	China	France	Hungary	Romania	South Africa	Spain	Turkey	United States	USSR	Yugoslavia	World Total
1979–0	1,650	142	415	218	340	159	417	888	328	504	550	3,409	5,414	525	15,238
1980–1	1,260	139	378	166	910	227	456	817	517	670	630	1,750	4,618	302	13,045
1981–2	1,810	115	457	165	1,332	398	624	810	254	405	575	2,035	4,678	327	14,723
1982–3[1]	2,300	93	507	94	1,286	650	585	843	202	750	660	2,419	5,344	202	16,508
1983–4[2]	2,700	154	505	51	1,300	810	500	750	525	750	700	1,447	5,100	137	16,000

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.668

Sunflowerseed Statistics in the United States

Crop Year	Acres Harvested In Ths.	Yield per Harv. Acre Pounds	Farm Price $ Metric Ton	Value of Production Mil. $	Supply				Disappearance					
					Production	Imports	Stocks Sept. 1	Total	Crushings	Exports	Non-Oil Usage	Seed	Residual	Total
					In Thousands of Metric Tons									
1979–0	5,410	1,349	200	660.0	3,310	10	90	3,410	547	1,820	——147——			2,514
1980–1	3,683	1,016	245	413.9	1,697	28	896	2,621	780	1,505	——154——			2,439
1981–2	3,811	1,177	238	485.4	2,035	32	182	2,249	374	1,555	——177——			2,106
1982–3[1]	4,724	1,129	196	474.1	2,419	40	143	2,602	766	1,348	——191——			2,252
1983–4[1]	3,058	1,043	285	412.4	1,447	43	297	1,787	725	800	—— 82——			1,660

[1] Preliminary. *Source, Economic Research Service, U.S.D.A.* T.666

Sunflowerseed Oil Statistics in the United States In Metric Tons

Crop Year Begin. Oct.	Supply			Disappearance			Price $ per Metric Ton (Crude Mpls.)
	Stocks Oct. 1	Production	Total	Exports & Shipments	Domestic Disappearance	Total	
1979–0	7	224	231	86	96	182	573
1980–1	49	298	347	301	5	306	594
1981–2	41	137	178	103	63	166	549
1982–3[1]	12	303	315	229	43	272	536
1983–4[2]	43	272	315	240	40	280	640

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.* T.667

Tall Oil

Tall Oil—Supply & Distribution in the U.S. In Millions of Pounds

Year Beginning Oct. 1	Supply (Crude)			Disposition										
						Non Food Products								
	Production	Stocks Oct. 1	Total Supply	Exports	To U.S. Territ.	Soap	Paint & Varnish	Linoleum & Oilcloth	Resins & Plastics	Other Drying Oils	Lubricants & Similar Oils	Fatty Acids	Other	Total Nonfood Products
1970	1,271	140	1,411	145	.2	3	42	—	—	32	8	1,023	41	1,118
1971	1,299	148	1,447	165	.1	3	46	—	—	28	8	1,033	41	1,132
1972	1,326	150	1,476	173	.2	3	45	—	—	—	9	1,062	43	1,163
1973	1,235	139	1,374	219	.3	3	42	—	—	—	8	967	42	1,062
1974	1,054	93	1,147	120	.1	2	33	—	—	—	7	783	33	858
1975–6	1,176	169	1,345	233	1.6	3	39	—	—	—	7	861	42	953
1976–7	1,181	148	1,329	176		7								1,015
1977–8	350	169	519	168		3								230
1978–9	1,267	150	1,417	107		3	8		5			1,141	96	1,254
1979–0[1]	1,353	150	1,503			3	11		10		6	1,208	74	1,312
1980–1[1]	1,336	155	1,491			4	11		15		5	1,206	94	1,334
1981–2[2]	1,190	137	1,327			3	16		17		4	1,096	48	1,185
1982–3[2]	1,557	151	1,708											
1983–4[2]		204												

[1] Preliminary. [2] Estimated. *Source: Agricultural Marketing Service, U.S.D.A.* T.669

U.S. Tall Oil Consumption in Inedible Products[2] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	106.9	83.1	94.8	100.8	101.5	89.7	76.1	101.1	96.2	100.4	93.3	81.7	1,126
1971	102.2	88.3	82.0	93.0	90.8	106.2	92.3	90.9	96.6	88.2	107.7	72.6	1,111
1972	95.8	92.8	105.4	91.9	95.6	92.8	88.7	104.4	95.8	102.4	88.9	74.0	1,129
1973	102.0	77.2	106.2	96.6	107.6	87.0	105.4	115.3	100.2	103.6	104.6	81.0	1,187
1974	98.6	77.5	90.5	86.8	92.9	81.4	90.5	84.0	70.6	83.1	82.5	84.0	1,022
1975	62.5	85.4	31.9	55.1	63.3	78.1	62.4	80.3	89.5	77.6	68.2	71.2	825
1976	65.7	91.0	87.2	70.4	101.5	82.8	69.4	98.9	68.6	80.8	79.4	79.5	975
1977[2]	81	88	103	97	99	95	87	97	85	110	100	91	1,134
1978	85	103	105	108	117	112	95	107	100	100	100	94	1,226
1979	97	102	111	119	125	123	90	85	107	117	105	103	1,284
1980	97	114	113	125	111	118	95	104	111	116	113	104	1,321
1981	110	110	107	110	128	124	97	112	104	104	108	83	1,203
1982	95.4	107.4	121.8	105.2	96.8	95.6	84.7	95.8	88.3	94.4	84.3	66.9	1,136
1983[1]	100.0	96.3	106.9	92.8	98.7	109.1	98.1	114.0	93.7	94.1	95.0	82.6	1,181
1984[1]	100.8	100.7	109.3										

[1] Preliminary. [2] Prior to 1977, data is for Domestic Disappearance. *Source: Statistical Reporting Service, U.S.D.A.* T.670

U.S. Average Wholesale Price of Tall Oil, Crude (Tanks-Works) In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
1969	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
1970	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
1971	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
1972	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	4.1	4.3	3.8
1973	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.2
1974	4.3	4.3	4.3	5.6	6.3	6.3	7.5	7.8	9.0	11.4	11.3	11.3	7.4
1975	13.4	13.4	10.9	9.0	8.3	7.3	6.0	5.8	5.8	5.8	5.9	6.0	8.1
1976	6.1	6.3	6.3	5.8	5.8	5.8	5.5	5.5	5.5	6.0	6.0	6.0	5.9
1977	6.6	6.6	6.6	7.0	7.0	7.0	7.0	7.1	7.1	7.1	7.1	7.2	7.0
1978	7.4	7.5	7.5	7.8	7.8	7.8	7.8	7.5	7.5	7.5	7.5	7.6	7.6
1979	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
1980	7.8	7.8	7.8	7.8	7.8	7.8	7.8	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1981													

Source: Economic Research Service, U.S.D.A. T.671

Tallow and Greases

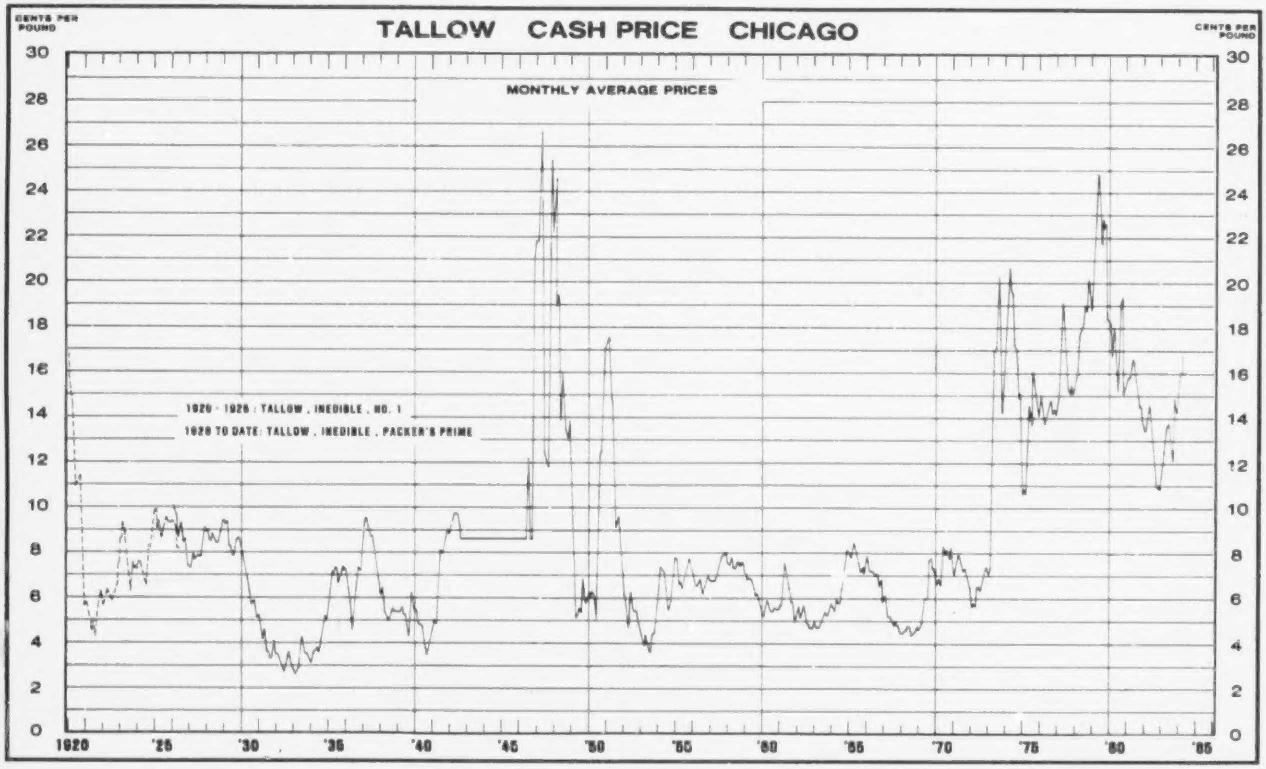
The USDA in early April 1984 estimated 1983/84 world production of tallow and grease at 6.35 million metric tons, about 1 percent above estimated 1982/83 production, and the highest level since at least 1979/80. Edible tallow is primarily a byproduct of the commercial beef industry and, in the U.S., must be federally inspected to be termed "edible." It is used in some processed foods and in direct use as a frying fat in the "fast food" segment of the restaurant industry in competition with soybean oil and other oils on a price basis. Inedible tallow and grease is a major raw material for fatty acids and is used extensively in animal feeds and also in lubricants. It is difficult to determine to what extent tallow is used for edible purposes worldwide, but the fact that the bulk of U.S. inedible tallow exports go to less developed countries suggests that its food use is greater than might be expected.

The U.S. is the world's largest producer of edible and inedible tallow and grease, and accounts for around 50 percent of annual world production. Stocks of edible tallow in the U.S. at the beginning of the 1983/84 season on August 1, 1983 were estimated by the USDA at 46 million pounds, unchanged from a year earlier. Production was estimated at 1.22 billion pounds, up from 1.20 billion in 1982 and 1.10 billion in 1981, as cattle slaughter increased by about 2 percent in calendar year 1983. Hog slaughter in calendar 1983 increased nearly 7 percent above the 1982 level. Reductions were forecast for both cattle and hog slaughter in 1984.

Consumption of edible tallow in the U.S. was expected to increase by 2 percent in 1983/84, to around 1.14 billion pounds, with consumption in direct use likely to account for most of the projected gain. Exports of edible tallow are relatively small, and were forecast at 66 million pounds versus 88 million in 1982/83.

U.S. production of edible tallow and grease was expected by the USDA to decline to around 6.1 billion pounds from 6.2 billion in 1982/83. Production from secondary sources, such as recycled tallow, could decline as a result of reduced export prospects, according to the USDA. Nevertheless, the U.S. is expected to continue to account for more than 50 percent of world tallow and grease exports annually. In calendar year 1983, U.S. inedible tallow exports amounted to 1.31 million metric tons compared with 1.34 million in 1982. Most of the exports were to less developed countries in Asia and Africa, and to a lesser extent, Latin America. Some increase in the domestic use of inedible tallow and grease was expected in 1983/84, with the economic recovery and high prices for other oils—particularly palm oil—likely to favor rising use of inedible tallow and grease in soaps and fatty acids.

Prices of inedible tallow (fancy, Chicago) ranged between 16 and 18.5 cents per pound from August through mid-December 1983, influenced by heavy slaughter in the fall of 1983. Grease prices (choice white, Chicago) ranged between 15 and 18 cents per pound in the August–December 1983 period. Prices of edible tallow followed the lead of soybean oil, rising to 24 cents per pound by mid-September, trending lower to around 20 cents in mid-December 1983.



TALLOW AND GREASES

World Production of Tallow and Greases (Edible and Inedible) In Thousands of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Colombia	USSR	France	W. Germany	Italy	Mexico	Netherlands	New Zealand	United Kingdom	United States	Eastern Europe	World Total
1973	230	319	198	204	18	318	157	140	85	25	78	80	104	2,591	115	4,991
1974	231	347	189	200	19	343	179	162	90	27	91	84	120	2,768	128	5,334
1975	261	368	198	199	22	346	195	166	90	29	83	122	135	2,344	138	5,072
1976	301	370	203	216	23	342	205	181	95	29	81	134	145	2,817	136	5,647
1977	312	400	233	217	22	333	230	186	100	31	83	120	152	2,770	131	5,675
1978	342	397	214	270	23	343	232	205	95	33	88	98	153	2,638	135	5,644
1979	331	334	200	203	26	345	243	221	100	32	90	112	188	3,058	137	6,171
1980[1]	308	309	200	204	29	340	220	235	105	33	94	118	235	3,157	132	6,273
1981[1]																6,218
1982[1]																6,137

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.672

Salient Statistics of Tallow and Greases (Inedible) in the United States In Millions of Pounds

	Supply				Exports & Shipments	Utilization in Nonfood Products						Wholesale Prices, ¢ Per Lb.			
													Inedible		
													Chicago		
Year	Apparent Production[2]	Imports	Stocks Jan. 1	Total		Soap	Animal Feed	Fatty Acids	Lubricants & Oils	Other	Total[3]	Edible, (Loose) Chicago	No. 1	Bleachable Fancy	N.Y. Special, Tanks
1973	4,843	10	341	5,194	2,299	566	1,077	899	111	270	2,540	18.4	12.4	14.9	7.2
1974	5,664	12	356	6,032	2,623	632	962	750	92	207	3,029	26.8	15.2	18.2	N.A.
1975	4,801	15	380	5,196	2,011	662	1,287	698	115	149	2,908	24.3	12.0	14.2	
1976	5,774	9	277	6,060	2,337	764	1,396	817	142	164	3,367	16.5	13.2	15.0	
1977	5,981	4	355	6,340	2,893	737	1,397	764	128	158	3,099	21.2	13.6	17.1	
1978	5,871	3	344	6,218	2,698	695	2,489				3,184	22.8	16.0	19.8	
1979[1]	5,956	3	347	6,306	2,795	663	2,454				3,117	26.2	18.8		
1980[4]	6,110		422		3,254	617	1,308	813	69	177	2,984	21.6	14.3		
1981[4]	6,042		451		3,137						2,894	31.1	15.3		
1982[4]			399		3,018								12.8		
1983			368												
1984			376												

[1] Preliminary. [2] Apparent production based on reported factory production, net foreign trade, & change in stocks. Reported factory production excludes that from small rendering plants. [3] Includes small amounts used in drying-oil products in some years. [4] Estimate. *Sources: Economic Research Service, U.S.D.A.; Bureau of Labor Statistics* T.673

Edible Tallow: Supply, Disappearance, and Price, U.S. In Million Pounds, Rendered Basis

	Supply			Disappearance					
Calendar year	Stocks Jan. 1	Production	Total	Domestic	Exports	Total	Direct use	Per capita	Price[1]
								Lb	*Ct/lb*
1978	42	835	877	802	20	822			22.8
1979	55	905	960	853	50	903	87	0.4	26.2
1980	57	1,043	1,101	957	88	1,047	242	1.1	21.6
1981	56	1,130	1,188	992	142	1,134	225	1.0	30.3
1982[2]	54	1,110	1,163	1,030	75	1,106	303	1.3	N.A.

[1] Loose, average wholesale, Chicago. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.673A

Average Wholesale Price of Tallow, Inedible, Packers (Prime), C.A.F. Chicago In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	7.2	8.6	10.1	11.8	14.3	16.8	16.8	20.3	15.9	14.6	14.2	15.4	13.8
1974	16.6	19.4	20.5	19.4	19.3	17.2	17.1	17.0	14.8	14.9	14.3	10.8	16.8
1975	10.6	10.8	10.6	12.2	13.6	14.6	13.6	16.1	15.9	14.9	14.5	14.1	13.5
1976	14.1	14.4	15.0	13.7	13.9	14.2	14.8	14.2	14.4	14.1	14.1	14.3	14.3
1977	14.7	14.9	15.9	17.6	19.2	17.6	16.9	15.3	15.0	15.5	15.3	15.0	16.1
1978	15.4	16.0	17.3	17.8	17.9	18.2	18.9	18.7	19.5	19.8	20.1	18.8	18.4
1979	19.8	20.8	22.9	24.8	24.1	21.7	22.8	22.4	22.6	20.9	18.4	18.2	21.6
1980	18.1	16.7	17.5	18.0	16.8	15.2	16.8	19.0	19.4	17.5	20.4	19.0	17.9
1981	15.8	15.8	16.0	16.5	15.6	16.0	15.2	15.0	14.5	14.5	13.9	13.6	13.6
1982	13.4	13.4	14.1	14.4	14.5	14.3	13.6	12.0	11.4	11.0	11.0	10.8	12.8
1983	11.4	12.0	12.5	13.6	13.8	13.2	12.1	13.7	14.9	14.2	14.8	15.1	13.4

Source: Economic Research Service, U.S.D.A. T.674

Tea

The USDA reported that tea production in selected countries in 1983 was estimated at 1.96 million metric tons, up 3.7 percent from the revised figure of 1.89 million tons produced in 1982. India continued to be the largest producer with 568,000 tonnes, up slightly from 566,000 tonnes produced in that country in 1982. Drought lowered the output of tea in southern India, but this was partly offset by improved production in the northeastern sector of the country. The production of tea in China was expected to continue to increase. The procurement of tea by the Chinese government reportedly reached 425,000 tonnes in 1983, up another 7 percent from the 1982 level and nearly 70 percent more than the 1977 production of 252,000 tonnes. Production in the Soviet Union was expected to increase because of more favorable weather. The total 1983 Soviet tea output was estimated at 145,000 tonnes. Japan continued to be a stable producer of tea with 100,000 tonnes estimated for 1983. Sri Lanka's tea production was affected by drought and internal strife, and tea production in Sri Lanka during 1983 was expected to total 170,000 tonnes, down 9.5 percent from the 1982 level and 19 percent below its 1981 output.

The production of tea in Kenya was up nearly 22 percent to an estimated 118,000 tonnes. The increase was primarily the result of more favorable weather conditions and higher yields for newer plantings. Production for Malawi and Tanzania was projected at slightly above 39,000 tonnes and 17,500 tonnes, respectively, which was lower than production the previous year. Only minor changes were anticipated in the 1983 production of tea in South America.

U.S. imports of tea from all countries in 1983 totaled 77,451 tonnes compared with 83,229 tonnes in 1982. World tea prices were expected to rise sharply in 1984 because of a slowdown in the rate of production from India, which produces nearly a third of the world's tea, and because of an increased demand for tea brought about by declines in the price for sugar. By December of 1983, the price of tea auctioned in London had jumped almost 82 percent in seven months, and was expected to increase another 9 to 10 percent in the first quarter of 1984.

World Tea Production, in Major Producing Countries In Thousands of Metric Tons

Year	Argentina	China	Sri-Lanka (Ceylon)	India	Indonesia	Iran	Japan	Kenya	Malawi	Mozambique	Bangladesh	Taiwan	Turkey	Uganda	USSR	World Total
1971	25.0	N.A.	217.8	435.5	48.2	24.0	92.9	36.3	18.6	16.5	12.5	27.0	33.6	18.0	68.6	1,123
1972	24.0	N.A.	213.5	456.0	49.8	22.0	94.8	53.3	20.7	18.7	23.8	26.2	46.5	23.4	71.3	1,197
1973	23.1	N.A.	211.3	472.0	54.5	23.0	101.0	56.6	23.6	18.8	27.6	28.6	43.2	20.4	74.8	1,236
1974	26.0	N.A.	204.0	492.1	51.7	25.0	95.2	53.4	23.3	17.6	32.2	24.2	42.8	21.7	80.8	1,245
1975	29.0	N.A.	213.7	487.1	56.8	23.0	105.4	56.7	26.2	13.1	29.0	26.1	55.6	18.4	86.3	1,284
1976	33.0	N.A.	196.6	511.8	61.1	22.0	100.1	62.0	28.3	13.8	33.3	24.8	59.5	15.4	92.0	1,316
1977	21.6	252.0	208.6	556.3	64.3	24.0	102.3	86.3	31.7	17.0	38.0	26.3	84.1	15.2	106.4	1,709
1978	26.3	268.0	199.0	563.8	73.2	23.0	104.7	93.4	31.7	18.1	38.0	25.9	86.5	10.9	111.2	1,755
1979	32.1	277.1	206.4	551.9	73.3	21.0	98.0	93.3	32.6	19.7	35.9	27.1	102.0	1.8	117.6	1,782
1980[1]	34.0	304.0	191.4	575.9	72.2	20.0	102.3	89.9	29.9	19.0	39.9	24.5	95.9	1.5	129.8	1,816
1981[2]	25.0	343	210.1	561	78.9	20.0	102	90.9	32.0	22	41.1	26.0	43	1.2	134	1,829
1982[2]		381	188	566			105	96	38	20			90		135	1,895
1983[2]		425	170	568			100	118	39	20					145	1,960
1984																

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.677

World Tea Exports from Producing Countries In Thousands of Metric Tons

Year	Sri Lanka (Ceylon)	China	India	Indonesia	Japan	Malaysia	Bangladesh	Taiwan	Total Asia	Kenya	Mozambique	Total Malawi	Africa	Argentina	Grand Total
1971	200.8	41.0	204.4	40.2	1.5	1.0	—	22.8	531.7	34.3	17.5	18.2	105.6	22.4	665.5
1972	190.1	42.0	209.8	38.5	1.9	.8	13.2	21.3	535.8	47.4	18.4	19.9	129.3	18.9	688.7
1973	205.5	50.2	188.2	35.6	2.2	.6	20.3	21.1	547.0	51.5	17.9	22.1	137.4	18.0	709.0
1974	185.1	63.6	205.9	50.2	1.8	.6	21.2	17.2	563.6	49.6	17.2	23.8	134.3	24.1	728.3
1975	212.4	61.3	219.4	46.0	2.2	.5	24.1	20.1	592.3	52.6	12.2	24.2	132.6	17.4	747.5
1976	199.7	61.2	237.3	47.5	3.2	.5	30.7	21.1	608.7	59.3	12.9	29.6	142.2	25.1	782.7
1977	185.5	81.8	229.6	51.3	3.5	.5	26.0	20.8	611.1	70.2	12.9	29.9	158.6	26.9	803.1
1978	192.6	86.9	176.1	56.2	3.4	.6	30.9	20.4	576.7	85.0	16.7	30.6	178.1	31.0	795.1
1979	187.5	106.8	199.6	53.6	3.1	.6	31.9	19.3	616.0	94.0	18.2	31.0	180.1	29.6	835.0
1980	184.5	107.9	224.0	74.2	2.7	.6	31.0	18.2	657.6	74.8	18.0	31.3	157.4	33.7	857.8
1981[1]	182.8	92.0	241.2	71.3	2.7	.6	29.2	15.9	648.8	75.6	18.0	31.5	159.6	25.8	843.1
1982	181.1	105.8	189.9	63.7	2.5	.6	34.4	10.1	596.1	79.8	18.0	37.1	172.1	33.1	810.7

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.678

TEA

Salient Statistics of Tea in the United States In Millions of Pounds

Year	U.S. Imports: (In Thous. Metric Tons[2]) Brazil	Argentina	Sri Lanka (Ceylon)	China	India	Indonesia	Japan	Kenya[2]	Mozambique	Netherlands	Malawi	Taiwan	Total	Total Supply	Domestic Disappearance Military	Civilian	Per Capita per Lb.
1971			54.8		22.8	25.4	2.6	21.4	3.9	8.7	7.4	8.0	175.4	217	2	158	.77
1972			42.9		16.8	21.7	3.9	14.6	4.6	7.6	6.9	8.2	151.5	207	3	160	.77
1973[3]		1.1	19.7	.6	8.2	13.3	2.1	8.4	3.1	5.1	2.7	3.2	78.9	216	2	165	.79
1974		1.8	19.6	1.2	7.5	13.3	1.9	7.9	3.1	6.4	3.2	3.3	80.9				.80
1975		1.8	18.3	2.0	6.8	12.9	1.7	8.4	2.7	2.4	2.2	4.0	72.3				.80
1976		2.1	21.1	3.0	8.0	11.6	3.2	10.7	2.0	1.3	4.1	4.8	82.2				.81
1977		4.9	16.6	4.2	12.3	14.7	3.4	9.5	2.3	3.0	5.6	5.7	92.1				.90
1978	2.0	6.7	14.0	2.9	1.7	10.7	3.2	8.2	1.4	4.1	4.2	3.0	68.8				.70
1979	3.5	7.0	14.7	6.5	5.9	11.2	2.9	9.4	2.4	4.7	2.5	2.3	79.2				.70
1980	2.8	10.3	12.2	8.0	4.2	13.9	2.5	6.8	5.0	5.9	2.1	3.1	83.8				.68
1981	3.5	10.0	13.0	7.1	4.7	14.7	2.5	5.5	4.2	7.7	2.4	4.2	86.3				
1982[1]	3.5	12.2	12.4	6.9	2.9	14.0	2.4	6.9	4.0	6.1	1.4	3.8	82.8				
1983																	

[1] Preliminary. [2] Imports prior to 1973 are in MILLIONS OF POUNDS. *Sources: Statistical Reporting Service, U.S.D.A.; Bureau of Census*

T.675

United States Imports of Tea In Thousands of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	13,226	12,360	15,073	18,078	15,128	16,529	20,150	25,141	19,427	4,631	3,828	11,862	175,432
1972	12,914	16,907	10,276	10,165	12,885	16,563	10,835	11,581	12,830	14,348	11,460	10,731	151,495
1973	15,481	14,295	15,399	14,107	17,423	12,425	13,660	12,614	12,527	16,878	16,506	11,997	173,314
1974	11,675	14,974	16,583	17,177	18,122	17,489	21,788	16,432	13,954	10,460	7,735	11,844	178,326
1975	14,297	12,200	15,486	13,648	14,694	12,170	9,915	11,276	12,404	17,594	13,940	11,843	159,287
1976	11,842	12,309	15,779	15,805	13,053	13,893	14,259	15,051	19,224	15,683	16,133	18,273	181,304
1977	16,059	15,064	22,389	23,302	27,345	22,335	22,252	15,932	9,994	9,702	7,213	10,924	203,012
1978	9,023	12,791	18,648	15,450	17,523	8,286	13,141	13,788	9,390	12,502	8,877	12,332	151,751
1979	14,797	10,568	15,584	13,822	13,556	14,352	13,361	14,809	15,841	16,992	15,432	15,578	174,690
1980	18,749	17,562	17,456	18,501	15,871	16,460	14,099	11,883	11,870	14,271	12,126	15,936	184,786
1981	12,891	18,354	14,696	19,220	18,990	17,736	14,586	19,128	13,205	15,855	13,473	12,121	190,254
1982	15,055	15,464	13,787	13,176	16,518	14,309	14,286	15,598	17,425	16,207	18,222	12,567	182,613
1983	13,748	15,092	14,170	15,799	16,018	10,931	12,159	11,747	15,025	16,531	13,600	15,631	170,451
1984	15,599												
1985													

Source: Department of Commerce

T.679

N.Y. Wholesale Price of Tea (Black)[1] In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	48.1	47.8	48.8	48.1	48.3	47.7	48.1	48.1	49.7	49.5	49.6	50.7	48.7
1972	50.3	50.8	53.0	53.5	53.5	52.1	51.0	49.1	49.6	49.5	47.8	47.6	50.7
1973	46.8	47.9	48.6	48.8	48.9	48.2	48.7	48.8	48.0	48.0	48.0	48.3	48.3
1974	49.1	50.4	58.2	62.7	62.3	64.7	63.8	64.9	64.4	65.3	66.9	71.4	62.0
1975	71.3	73.9	75.5	72.1	69.4	68.7	65.3	65.0	63.6	65.4	65.9	66.4	68.5
1976	66.1	66.7	67.3	67.1	68.2	71.4	75.9	82.4	81.7	81.3	80.3	82.5	74.2
1977	N.A.	99.9	136.8	211.4	191.6	157.9	144.2	136.0	129.4	116.1	116.8	112.1	141.1
1978	109.9	122.1	121.5	115.1	110.4	109.4	109.6	108.8	107.4	110.3	110.5	106.6	118.8
1979	108.9	107.0	105.3	102.1	99.9	96.4	97.5	97.8	102.0	105.9	103.3	101.8	102.3
1980	103.9	108.9	110.3	110.0	109.3	106.3	106.6	107.1	107.8	N.A.	104.6	103.6	107.1
1981	103.3	107.3	108.4	108.9	106.8	106.3	104.3	103.7	100.4	99.3	99.6	99.5	104.0
1982	96.7	98.3	99.6	97.8	98.3	99.8	101.0	101.9	104.3	106.2	107.0	107.6	101.5
1983	111.7	112.8	112.6	111.3	111.5	114.4	112.3	114.0	122.8	125.1	157.6	153.8	121.7
1984	197.6	178.8											
1985													

[1] Medium broken grade from Ceylon & India; ex-dock or ex-warehouse. *Source: Bureau of Labor Statistics* (0191–0331.02)

T.676

Tin

World mine production of tin in 1983 was 15 percent smaller than in 1982, according to U.S. Bureau of Mines estimate. Malaysia accounted for the largest share of total estimated production—20 percent, followed by the USSR with 17 percent, Indonesia—14 percent, and Thailand—10 percent. The most significant reductions in production in 1983 were registered by Malaysia, Indonesia, and Thailand. U.S. production of primary tin is negligible, but about one-fourth of the tin consumed in the U.S. is derived from secondary material.

Around 72 percent of apparent U.S. tin consumption is accounted for by net imports. U.S. imports of tin metal increased 22 percent in 1983, while imports of concentrate (tin content) dropped sharply. Imports of concentrate from Peru were only about one-fourth as large as a year earlier. Imports of tin metal from Thailand were lower in 1983 than a year earlier but that country maintained its position as the most important supplier of metal to the U.S., accounting for 22 percent of the total. Indonesia accounted for 18 percent of total metal imports into the U.S. in 1983, Bolivia—17 percent; Brazil—16 percent, and Malaysia—14 percent.

Reported U.S. consumption of primary tin rose 12 percent in 1983 from the 1982 figure of 36,167 metric tons. Consumption of secondary tin increased 16 percent, from 13,276 tons in 1982. The estimated major uses for tin in 1983 were cans and containers—23 percent; electrical—17 percent; construction—13 percent; transportation—14 percent; other uses—33 percent. The major finished products were solder, which accounted for 28 percent of the total, and tinplate, which accounted for 25 percent.

U.S. stocks of tin at the end of December 1983 held at plants were reported by the Bureau of Mines at only 2,412 metric tons, off 68 percent from the year-earlier level, and stocks at jobbers—importers were off 56 percent, to only 608 tonnes.

The amount of tin in the U.S. stockpile remained well above the goal in 1983 and the General Services Administration (GSA) sold additional amounts of stockpiled tin. Disposals since July 1980, when the multi-year sales program started, totaled 13,217 metric tons (tonnes) as of early March 1984, with the sales price at the time $5.91 per pound.

Throughout 1983, the International Tin Council (ITC) continued the imposition of export controls on member producing countries in an attempt to balance world tin supply and demand. In the first quarter of 1984 the Straits tin price in Penang remained at the International Tin Agreement floor of 29.15 ringgit per kilo. On August 16, 1983, the Association of Tin Producing Countries (ATPC) was formally constituted. Participating countries included Australia, Bolivia, Indonesia, Malaysia, Nigeria, Thailand, and Zaire. The announced purpose of ATPC was to foster technological advances and to share information. The United States is not a member of ATPC.

Tin prices increased in the first half of 1983, but declined later. The composite price of Straits tin for delivery in New York as quoted by *Metals Week* rose from a January 1983 low of 618.40 U.S. cents per pound to the year's high of 698.69 in April and subsequently declined to a December low of 620.30 cents per pound. A large worldwide excess of supply relative to demand operated against sustained upturns in tin prices.

Tin futures trade on the London Metal Exch.

World Mine Production of Tin (Content of Ore) In Thousands of Metric Tons

Year	Australia	Bolivia[1]	Brazil	USSR	China[3]	Zaire (Congo)	Indonesia	Japan	Malaysia	Nigeria	Rwanda	South Africa	Thailand	United Kingdom	World Total
1974	10.5	29.5	4.4	29.5	20.0	4.7	25.0	.5	68.1	5.5	1.3	2.5	20.3	3.8	232.9
1975	9.6	24.3	5.0	30.0	22.0	4.6	25.3	.7	64.4	4.7	1.4	2.6	16.4	4.1	222.3
1976	10.6	30.3	5.4	31.0	11.0	3.8	23.4	.6	63.4	3.7	1.6	2.8	20.5	3.3	218.4
1977	10.6	33.7	6.3	33.0	13.0	5.1	25.9	.6	58.7	3.3	1.6	2.9	24.2	4.1	230.7
1978	11.9	30.9	6.3	34.0	14.0	4.4	27.4	.6	62.7	2.9	1.5	2.9	30.2	3.1	241.1
1979	12.6	27.6	7.0	35.0	14.0	3.9	29.4	.7	63.0	2.8	1.9	2.7	34.0	2.4	245.3
1980	11.6	27.3	6.9	36.0	14.6	3.2	32.5	.5	61.4	2.6	2.1	2.9	33.7	3.0	247.3
1981	12.3	29.8	8.3	36.0	15.0	2.5	35.2	.6	59.9	2.3	1.8	2.8	31.5	3.9	252.6
1982[2]	12.7	26.8	9.5	37.0	15.0	2.2	36.5	.5	52.3	2.7	1.8	3.0	26.0	4.0	241.0
1983[3]	10.0	25.0	11.0	35.0	16.0	1.7	28.0		40.0	2.2			20.0	3.0	205.0

[1] Exports. [2] Preliminary. [3] Estimate. Source: *Bureau of Mines* T.682

World Smelter Production of Tin In Thousands of Metric Tons

Year	Australia	Belgium	Bolivia	Brazil	China	Zaire (Congo)	W. Germany	Indonesia	Japan	Malaysia	Nigeria	Portugal	South Africa	Un. Kingdom	United States[1]	USSR	Total
1974	6.7	3.4	7.1	4.9	20.0	1.0	1.4	15.1	1.3	83.1	5.6	.5		20.4	6.1	29.5	236.2
1975	5.3	4.6	7.5	5.4	22.0	.6	1.3	17.8	1.2	83.1	4.7	.4		11.5	6.5	30.0	227.9
1976	5.6	4.1	9.8	6.4	11.0	.5	1.4	23.3	1.1	77.3	3.7	.3		11.2	5.7	31.0	224.1
1977	5.6	3.5	13.0	7.4	13.0	.8	3.9	24.0	1.3	66.3	3.3	1.0		10.5	6.7	33.0	228.5
1978	5.1	3.3	16.3	9.3	14.0	.5	4.8	25.8	1.1	72.0	3.0	.9	.6	8.4	5.9	34.0	244.1
1979	5.4	2.2	15.0	10.1	14.0	.5	4.1	27.8	1.3	73.1	2.9	1.1	.8	8.0	4.6	35.0	249.2
1980	4.8	2.8	18.2	8.8	14.6	.5	2.3	30.5	1.3	71.3	2.7	.9	1.1	5.8	3.0	36.0	249.9
1981	4.3	.1	20.0	7.6	15.0	.6	1.8	32.5	1.3	70.3	2.5	.4	2.1	6.8	2.0	36.0	247.3
1982[2]	3.1	—	19.0	9.3	15.0	.6	1.8	33.0	1.3	68.0	2.8	.4	2.8	5.6	3.5	37.0	241.2

[1] Imports into the U.S. of tin concentrates (tin content). [2] Preliminary. Source: *Bureau of Mines* T.683

TIN

Tin Foreign Trade of the United States In Metric[5] Tons

		Imports (For Consumption)														
		Concentrates[3] (Ore)			Bars, Blocks, Pigs, etc.[4] (Metal)											
Year	Exports (Metal[2])	Total All Ore	Bolivia	Peru	Total All Metal	Thailand	Belgium	Indonesia	Malaysia	Australia	Singapore	United Kingdom	Bolivia	Brazil	China	Nigeria
1974	8,415	5,877	5,877	—	39,602	5,766	10	4,121	20,668	—		1,834	1,135	—	—	521
1975[5]	3,596	6,415	6,415	—	44,366	7,305	—	4,302	23,542	—	46	444	147	—	—	58
1976	2,338	5,733	5,733	—	45,055	6,885	—	4,972	26,981	—	15	284	1,978	—	—	—
1977	5,480	6,724	6,667	—	47,774	7,780	—	5,294	27,084	—	207	513	3,358	2,380	381	2
1978	4,692	3,873	3,541	—	46,776	6,865	155	5,664	23,928	—	230	468	5,768	1,810	1,571	—
1979	3,417	4,529	3,745	—	48,355	10,440	100	5,429	23,448	—	1,070	550	5,387	933	185	—
1980	4,294	840	528	—	45,982	12,414	190	6,477	15,548	145	864	416	5,597	2,031	858	770
1981	6,080	232	—	232	45,874	11,967	—	7,096	13,163	552	656	46	8,277	1,129	2,032	520
1982[1]	9,080	1,961	192	1,416	27,939	9,116	10	5,744	2,364	334	600	55	4,340	2,409	2,632	124
1983[6]	2,067	969	257	341	34,047	7,436	45	6,004	4,704	390	1,029	18	5,739	5,604	1,938	265

[1] Preliminary. [2] Ingots, Pigs & Bars. Includes re-exports. [3] Tin content. [4] Also grain, or granulated. [5] Data prior to 1975 are in LONG TONS. [6] Estimate. *Source: Department of Commerce* T.684

United States Tin (Pig) Consumption (Total) In Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	3,871	4,847	4,841	5,055	4,394	4,308	3,810	4,298	4,521	4,755	4,410	4,618	55,800
1976	5,170	4,930	5,825	5,415	5,490	5,965	5,240	5,380	5,680	6,395	5,950	5,700	62,928
1977	5,600	5,500	6,800	5,800	5,800	6,000	5,200	5,800	5,900	5,400	5,000	5,100	60,732
1978	5,400	5,000	5,500	5,200	5,700	5,400	4,600	5,200	5,200	5,300	5,400	4,900	61,531
1979	5,400	5,500	6,400	5,400	5,400	5,300	4,900	4,900	5,000	5,500	5,000	4,600	62,465
1980	5,500	5,300	5,750	5,300	4,600	4,100	3,700	3,900	4,150	4,300	4,050	3,750	56,362
1981	4,300	4,400	4,100	4,600	4,400	4,350	3,900	4,200	3,950	3,900	3,400	2,950	54,373
1982	3,400	3,300	3,750	5,100	5,000	5,100	4,900	4,700	4,700	4,600	4,500	4,400	53,450
1983	4,400	4,700	4,900	4,700	4,700	4,800	4,300	4,600	4,700	4,800	4,400	4,800	55,800

T.681

United States Tin Stocks (Pig—Industrial) In Metric Tons

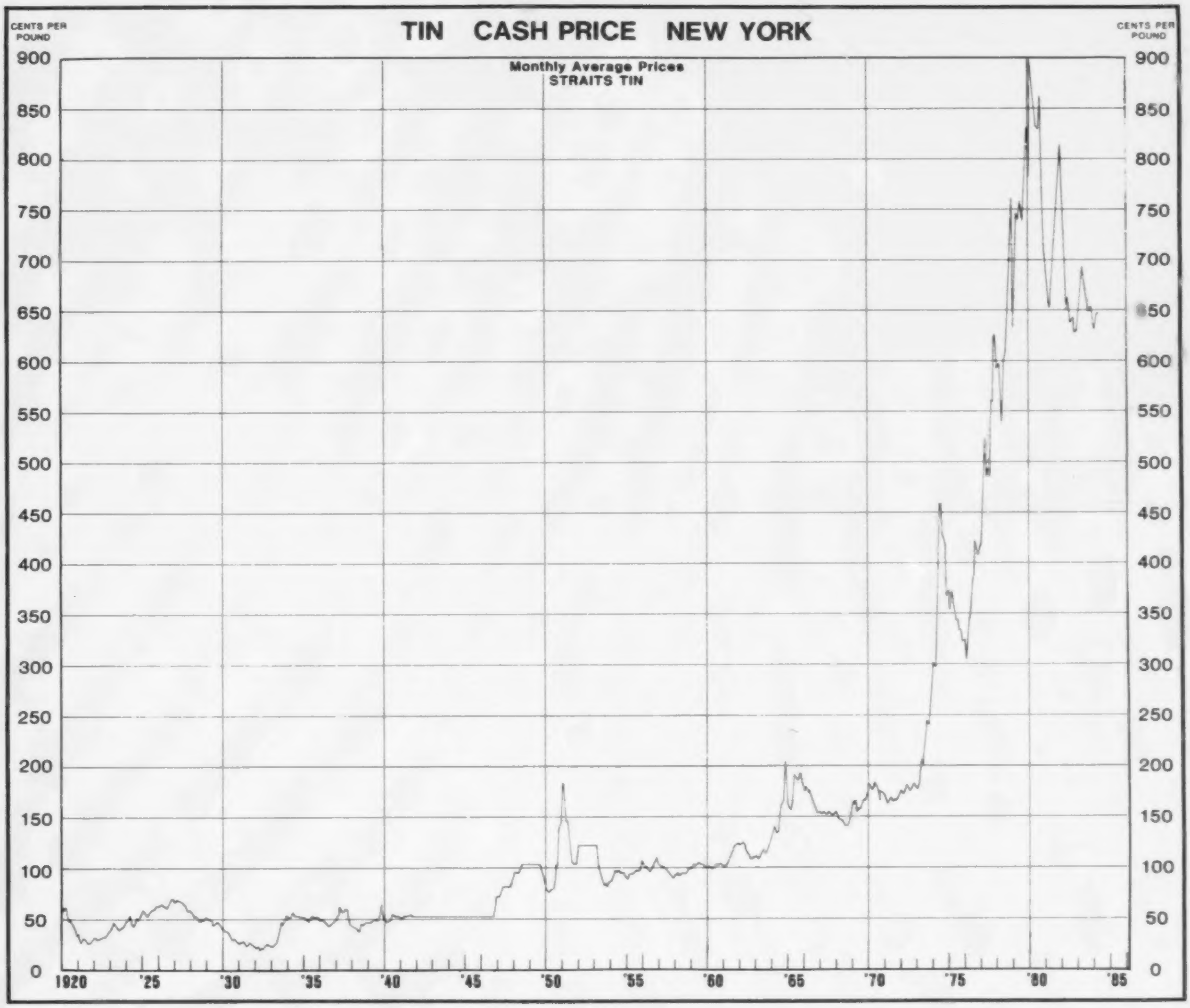
Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1976	9,642	9,395	8,624	9,189	7,855	6,963	8,375	9,623	8,749	7,871	7,929	7,213
1977	7,282	8,032	7,883	5,874	6,157	5,644	4,720	6,305	5,557	5,378	9,124	7,272
1978	8,441	7,626	6,628	6,291	7,785	8,139	7,846	7,817	7,260	5,774	4,975	5,666
1979	5,040	4,594	4,254	5,891	6,097	5,938	6,317	6,270	6,096	5,058	4,901	4,244
1980	4,238	7,720	6,882	7,527	5,443	7,263	6,592	6,544	6,051	5,180	5,208	5,086
1981	5,504	5,968	5,745	5,229	5,725	5,978	6,227	6,465	5,663	5,710	5,325	5,563
1982	5,988	3,872	3,490	3,829	5,222	4,953	4,653	3,888	2,910	2,940	2,970	3,437
1983	3,152	4,609	3,513	3,815	4,026	3,527	3,634	3,931	4,091	3,074	3,180	3,180
1984	3,020											

Source. Bureau of Mines T.680

Secondary Tin Recovered in the United States In Metric Tons

	Tin Recovered at Detinning Plants						Tin Recovered by Form of Recovery								
		Tin Recovered													
Year	Tin-plate Scrap Treated (Ths. Tons)	As Metal	In Compounds[2]	Total	Weight of Tin Compounds Produced	Avg. Quantity of Tin Recov. Per Ton of Tin-Scrap (Kilog.)	Tin Metal	Bronze & Brass	Solder	Type Metal	Babbitt	Anti-Monial Lead	Chemical Compounds	Misc.[3]	Grand Total
1976	685.5	1,195	424	1,619	1,348	2.36	1,467	8,319	4,513	668	495	548	424	12	16,446
1977	667.4	1,376	365	1,741	1,516	2.61	1,668	10,397	4,094	708	694	565	365	12	18,503
1978	714.9	1,324	463	1,787	1,803	2.50	1,565	12,419	4,363	1,038	521	712	463	19	21,100
1979	841.4	1,536	433	1,969	1,256	2.34	1,767	12,090	5,282	584	441	867	433	29	21,493
1980	766.9	1,457	321	1,778	1,533	2.32	1,703	10,402	4,423	525	378	856	321	30	18,638
1981	668.0	1,328	265	1,593	1,220	2.38	1,587	8,894	3,035	576	261	791	265	29	15,438
1982[1]	456.6	810	282	1,092	1,754	2.39	1,067	6,971	2,723	222	237	1,015	282	27	12,544

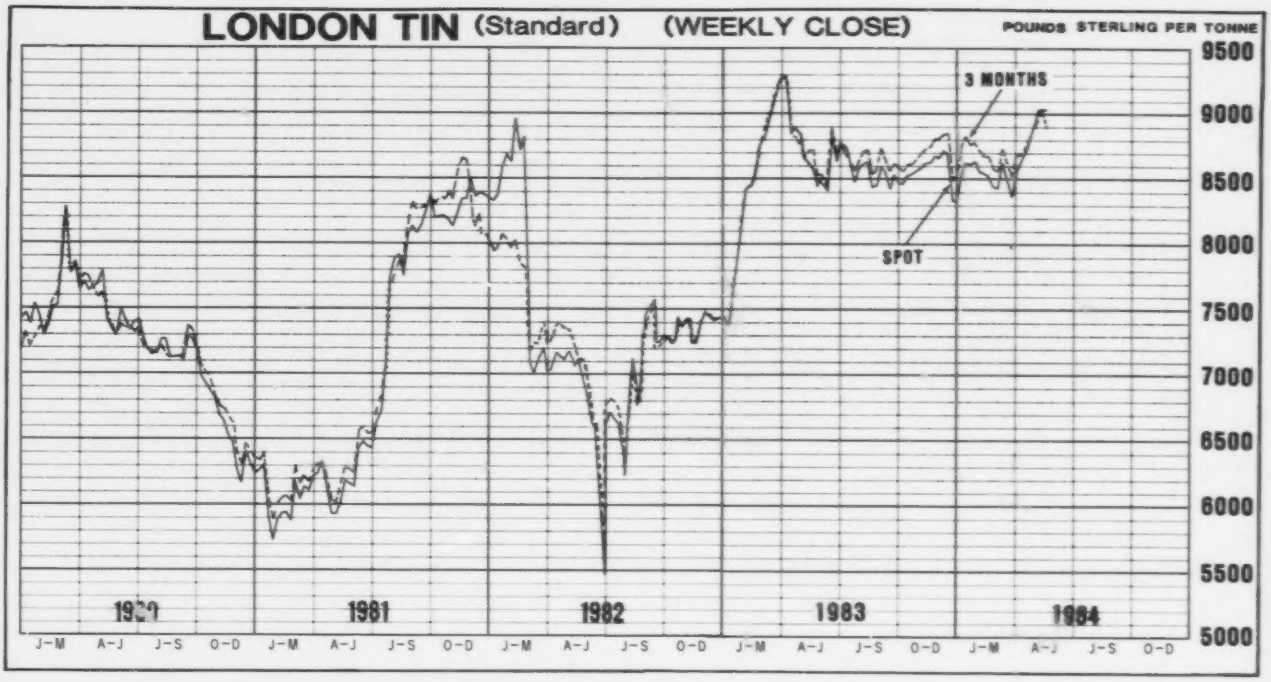
[1] Preliminary. [2] Tin content. [3] Includes foil, cable lead & terne metal. *Source: Bureau of Mines* T.687



Average Price of Straits Tin (Alloyer Price[1]) in New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	161.64	162.85	167.01	168.88	166.02	164.48	166.44	166.07	167.29	167.70	175.39	174.36	167.34
1972	171.31	172.00	179.81	181.98	177.92	175.03	176.61	179.12	181.99	180.40	177.21	176.25	177.47
1973	179.05	192.00	205.90	202.44	209.11	212.27	237.55	243.45	239.50	245.91	262.44	300.99	227.48
1974	298.14	351.54	389.43	440.77	456.88	458.50	426.61	422.99	415.92	365.33	370.96	351.87	395.75
1975	363.76	372.03	366.04	354.10	342.54	342.48	333.32	331.85	322.77	321.95	324.03	303.02	339.83
1976[1]	312.39	326.00	349.07	358.80	377.00	390.30	424.27	411.27	405.40	406.77	414.84	423.25	383.34
1977	470.54	514.16	522.97	485.28	491.93	482.15	518.71	559.51	558.47	619.25	626.16	613.36	538.76
1978	591.19	595.93	557.48	537.85	570.58	600.95	606.21	641.80	679.66	739.69	758.84	695.86	631.34
1979	684.56	724.57	746.14	740.06	745.18	760.14	712.31	739.93	762.03	785.54	801.23	830.88	756.87
1980	836.46	866.39	900.23	872.21	861.84	845.19	836.95	834.61	861.92	832.92	788.67	751.36	840.73
1981	739.94	705.76	691.70	677.38	652.07	652.77	680.22	746.06	777.36	798.70	813.00	801.59	728.05
1982	787.41	749.93	669.51	649.58	662.35	643.00	638.00	636.33	644.33	627.94	627.93	630.18	663.88
1983	648.90	653.89	669.18	692.29	683.36	670.54	663.13	653.10	649.34	650.65	653.02	636.71	660.34
1984	631.89	633.46	645.65	647.52									
1985													

[1] Prices prior to 1976 are for PROMPT DELIVERY. *Source: American Metal Market* T.685



U.S. Consumption of Primary and Secondary Tin In Metric Tons

Year	Net Import Reliance as a % of Apparent Consumption	Industry Stocks Jan. 1	Net Receipts Primary	Net Receipts Secondary	Net Receipts Scrap	Net Receipts Total	Available Supply	Industry Stocks Dec. 31	Total Processed	Consumed in Mfg. Pdt's.
1974		18,534	55,382	2,285	12,296	69,963	88,497	21,051	62,269	65,780
1975	84	21,051	42,430	2,699	10,568	55,697	76,748	19,510	57,238	55,800
1976	85	19,510	49,995	2,019	10,189	62,203	81,713	16,894	64,819	62,928
1977	82	16,894	48,215	4,025	10,604	62,844	79,738	16,858	62,880	60,732
1978	79	16,858	46,821	2,541	10,499	59,861	76,719	13,584	63,135	61,531
1979	80	13,584	50,126	2,636	10,659	63,421	77,005	12,938	64,067	62,465
1980	79	12,938	43,545	2,461	7,709	53,715	66,653	9,456	57,197	56,362
1981	77	9,479	41,162	5,692	8,050	54,904	64,360	9,261	55,099	54,373
1982	68	9,261	35,843	6,507	7,830	50,180	59,441	9,697	49,744	49,744
1983[2]	72	9,697								

[1] Preliminary. [2] Estimated. *Source: Bureau of Mines*

T.686

Consumption of Tin in the United States by Finished Products In Metric Tons of Contained Tin

Year	Alloys	Tin-plate[2]	Solder	Babbitt	Bronze & Brass	Collap. Tubes & Foil	Tinning	Chemi-cals[3]	Tin Powder	Type Metal	Bar Tin & Anodes	White Metal	Other	Total Primary	Total Secondary
1974		22,686	15,586	3,306	9,508	968	2,563	4,942	1,331	344	812	2,005		52,439	13,341
1975		18,869	15,075	2,605	7,555	538	1,896	3,998	850	265	637	2,217		43,620	12,180
1976		20,766	17,728	2,423	7,656	694	2,308	5,621	1,208	216	758	2,347		51,767	11,161
1977		18,539	17,315	2,093	8,606	787	2,323	5,727	1,287	202	578	1,655		47,596	13,136
1978		17,280	17,770	2,346	9,048	673	2,431	4,557	1,360	171	424	1,484		48,403	13,128
1979	2,428	17,929	18,022	2,243	8,690	686	2,584	4,797	1,435	140	567	1,258	1,686	49,496	12,969
1980	134	16,346	15,618	2,380	7,478	526	2,577	N.A.	1,109	N.A.	486	914	8,794	44,342	12,020
1981	2,435	13,306	15,799	3,844	7,041	561	2,491	4,417	983	52	455	1,201	1,788	40,229	14,144
1982[1]	2,288	11,134	13,142	1,915	4,400	3,572	1,887	3,503	906	57	509	1,177	4,953	36,167	13,276
1983[4]		9,081	9,944	2,345	3,480		1,114		723		518	408	8,342	40,400	15,400

[1] Preliminary. [2] Includes small quantity of secondary pig tin and tin acquired in chemicals. [3] Including tin oxide. [4] Estimated. *Source: Bureau of Mines*

T.688

Titanium

The titanium industry is based on the unique properties of titanium metal and titanium dioxide. Only about 5 percent of the world's annual production of titanium minerals is used to make titanium metal. White titanium dioxide pigment is made from 95 percent of titanium minerals.

Titanium metal, due to its high strength-to-weight ratio and resistance to corrosion, is an important strategic and critical material. It is widely used for high performance military and civilian aircraft (in airframes and engines), for powerplant surface condensers, and a wide variety of chemical processing and handling equipment. Because of its whiteness, high refractive index, and resulting light-scattering ability, titanium dioxide in its two major allotropic forms (rutile and anatase), is the predominant white pigment for paints, paper, plastics, rubber, and many other materials. Most titanium dioxide pigment is produced from ilmenite. As recently as 1981, 56 percent of the world production of titanium metal was produced from rutile and 44 percent from ilmenite.

Estimated U.S. production of titanium metal ingot in 1983 was close to 5 percent above 1982 production, according to preliminary U.S. Bureau of Mines data. Domestic consumption of sponge metal was estimated at 16,072 short tons, 7 percent less than in 1982, but scrap consumption increased 23 percent, to 10,467 tons, while ingot consumption was 5 percent lower than in 1982, at 25,495 tons. U.S. imports of sponge metal declined 12 percent in 1983 while imports of scrap rose sharply, by 23 percent. Total imports of titanium metal in 1983 were 2 percent larger than in 1982.

U.S. exports of titanium metal in 1983 were 3 percent smaller than a year earlier, featured by a sharp drop of 38 percent in exports of ingot, slab, sheet bar, etc., which was only partly offset by a 26 percent gain in scrap exports.

Import sources during the 1979–82 period for sponge metal were: Japan—85 percent; China—11 percent, and the USSR—4 percent. Major import sources for titanium dioxide were: the Federal Republic of Germany—30 percent; Canada—14 percent; France—13 percent; Spain—11 percent; others—32 percent.

Estimated 1983 U.S. production of titanium dioxide pigment totaled 759,948 short tons, 16 percent larger than in 1982, according to preliminary data of the U.S. Bureau of Mines. Imports for consumption totaled 174,857 tons, up 26 percent from the 1982 level; and exports increased 37 percent, to 91,702 tons in 1983. Apparent consumption rose 14 percent in 1983 from the 1982 use, to 850,901 tons. Stocks at the end of December 1983 were drawn down by 9 percent, to 79,135 tons.

A major uncertainty influencing the titanium metal industry is the wide fluctuation in demand caused by changes in requirements for both military and commercial aircraft programs. Titanium sponge metal producers have repeatedly increased capacity in response to anticipated demand only to have been left with excess capacity when programs were cancelled or cut back. Trade press reports indicate that in commercial aircraft, the major titanium users are the 747, 757, 767, DC-10, and Airbus programs. The Bureau of Mines indicates that a further recovery in use depends mainly on the level of demand in the commercial aircraft industry, and on increases in defense orders, particularly for the B-1 long range combat aircraft. In 1983, about 60 percent of the titanium metal was used in jet engines, airframes, and space and missile applications; the chemical processing industry, power generation, and marine and ordnance applications—20 percent; and steel and other alloys—20 percent. Major uses for titanium dioxide were: paints, varnishes and lacquer—48 percent; paper—27 percent; plastics—13 percent; rubber—3 percent; ceramics—1 percent; and other uses—8 percent.

The U.S. Bureau of Mines estimates that U.S. production of titanium sponge in 1984 will be 18,000 tons, and titanium dioxide pigment production 760,000 tons. Apparent domestic consumption of sponge in 1984 is expected to be 20,000 tons, and consumption of pigment 840,000 tons.

As of November 30, 1983, the U.S. government stockpile inventory of titanium material amounted to 21,465 tons (stockpile grade), whereas the goal for stockpile grade material was 195,000 tons. The General Services Administration (GSA) announced on October 28, 1983 the award of contracts for the purchase of 4,500 tons of primary titanium for the National Defense Stockpile; 3,000 tons from Japan, 1,000 tons from the largest U.S. producer, and 500 tons from the United Kingdom, to be delivered by September 2, 1984.

According to the Bureau of Mines, list prices of titanium metal and titanium dioxide were being discounted in 1983, by as much as 25 percent and 20 percent, respectively.

Average Titanium Prices in the United States

Year	Titanium Ilmenite—54% TiO_2 F.O.B. Atlantic Seaboard—$ per Long Ton	Titanium-Ilmenite Domestic F.O.B. Titen, Fla. — $ per Long Ton —	Titanium Rutile F.O.B. Atlantic & Great Lakes Ports, Last Quarter (Spot) $ per Short Ton	Synthetic F.O.B. Mobile, Ala. — $ per Short Ton —	Titanium Metal Sponge, Yearend $ per Pound	Titanium Dioxide Pigments ($ per Lb.) Anatase	Titanium Dioxide Rutile, Yearend $ per Pound
1976	55		510		2.70	0.410	0.465
1977	55		360		2.98	0.435	0.485
1978	50		340		3.28	0.460	0.510
1979	50	—	390		3.98	0.530	0.590
1980	55	—	440	310	7.02	0.570	0.630
1981	70–75	39	450–475	340	7.65	0.690	0.750
1982	70–75	44	450–475	350	5.55–5.85	0.690	0.750
1983[1]	70–75	44	415	350	5.55	0.690	0.75

[1] Preliminary. *Source: U.S. Bureau of Mines* T.690

World Production of Titanium Ilmenite Concentrates[2] In Thousands of Short Tons

Year	Australia (Shipments)	Canada[2]	Sri Lanka (Ceylon)	Finland	India	Japan[3]	Malaysia (Exports)	Norway	Brazil	USSR	China	South Africa[3]	United States[4]	World Total[2]
1975	1,111	826.6	70.6	135.1	90.0	4.9	123.7	580.5	5.1	360.0	—	—	717.3	4,026
1976	1,071	897.4	61.5	135.1	90.0	3.8	198.4	845.1	16.1	420.0	—	—	652.4	4,391
1977	1,139	763.2	37.6	137.5	151.4	1.4	169.4	913.3	14.6	440.0	—	—	638.5	4,418
1978	1,383	937.0	36.4	145.4	178.1	.2	205.9	845.5	22.1	450.0	N.A.	100.0	589.8	4,912
1979	1,268	525.8	61.0	131.9	161.9	.2	220.3	903.7	14.5	450.0	N.A.	316.0	639.8	4,717
1980	1,443	964.2	37.4	175.3	185.1	—	208.5	912.5	18.6	460.0	N.A.	379.0	548.9	5,359
1981	1,452	837.0	88.2	178.0	208.1	—	190.4	724.9	16.6	470.0	150.0	408.0	509.3	5,255
1982[1]	1,276	750.0	88.0	176.0	209.0	—	121.0	608.2	17.0	475.0	150.0	420.0	227.8	4,577
1983[6]	1,250	675.0	80.0	170.0	200.0		120.0	600.0		475.0	150.0	400.0	N.A.	4,140

[1] Preliminary. [2] Includes Ti slag containing approx. 70% TiO_2. [3] Represents titanium slag. [4] Includes a mixed product containing ilmenite, leucoxene, & rutile. [5] Includes slag & concentrate. [6] Estimate. *Source: Bureau of Mines* T.692

World Production of Titanium Rutile Concentrates In Short Tons

Year	South Africa	Australia	USSR	Brazil	Sierra Leone	India	Sri Lanka (Ceylon)	United States	World Total
1975	—	383,990	30,000	115	—	4,000	3,427	11,000	421,532
1976	—	429,625	10,000	56	—	4,000	1,145	N.A.	444,826
1977	5,000	358,561	10,000	141	—	6,053	1,078	N.A.	380,833
1978	20,000	283,376	10,000	402	—	6,239	12,673	N.A.	332,690
1979	46,000	307,435	10,000	484	8,267	5,445	16,176	N.A.	393,807
1980	53,000	323,801	10,000	472	52,356	5,908	14,097	N.A.	459,634
1981[1]	55,000	263,729	10,000	190	55,992	9,647	14,662	N.A.	409,220
1982[1]	52,000	243,343	10,000	220	52,590	8,800	14,300	N.A.	381,253
1983[2]	60,000	240,000			80,000	10,000	15,000		415,000

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.691

World Production of Titanium Sponge Metal & U.S. Consumption of Titanium Concentrates In Short Tons

	Production of Titanium Sponge Metal[1]					U.S. Consumption of Titanium Concentrates, by Products						
						Ilmenite (TiO_2 Content)			Rutile (TiO_2 Content)			
Year	USSR	Un. Kingdom	Japan	United States	Total	Pigments	Misc.	Total	Welding Rod Coatings	Pigments	Misc.	Total
1975		2,500	8,358	18,000	—	424,302	8,107	432,409	9,782	181,128	28,013	218,923
1976		2,100	6,995	14,000	—	490,845	7,168	498,013	7,736	194,950	20,926	223,612
1977	39,000	2,400	7,049	N.A.	—	514,429	6,765	521,194	8,184	136,191	29,465	173,840
1978	39,000	2,400	10,115	N.A.	—	467,410	8,038	475,448	8,427	195,431	41,326	245,184
1979	43,000	2,600	14,000	N.A.	—	475,342	11,886	478,228	9,947	230,776	52,189	292,912
1980	45,000	2,600	21,257	N.A.	—	502,108	11,207	513,315	6,876	211,599	59,407	277,882
1981	42,000	2,600	27,500	26,419	100,519	501,301	9,721	511,022	6,944	192,779	66,873	266,596
1982[3]	44,000	2,600	18,600	15,600	82,300	345,618	6,775	352,393	5,275	184,403	35,435	225,113
1983[2]	44,000	2,000	12,000	13,000	72,500							

[1] Unconsolidated metal in various forms. [2] Estimated. [3] Preliminary. *Source: Bureau of Mines* T.689

Salient Statistics of Titanium[4] in the United States In Short Tons

	Ilmenite				Titanium Slag			Rutile		Exports of Titanium Products			
Year	Production (Gross Wt.)	Shipments (TiO_2)	Imports[3]	Stocks Dec. 31 (TiO_2)	Consumption (TiO_2)	Imports[3]	Stocks (TiO_2)	Imports[3]	Stocks Dec. 31 (TiO_2)	Ores & Concentrates	Scrap	Dioxide & Pigments	Ingots, Billets, Etc.
1974	744,571	434,605	82,448	325,918	182,257	236,272	40,836	246,489	101,394	3,264	4,730	30,379	1,719
1975	717,281	404,269	122,010	378,181	104,585	212,682	62,130	224,499	131,742	3,147	4,326	15,807	1,900
1976	652,404	374,989	168,402	429,801	144,506	171,624	70,242	281,712	143,243	4,802	6,144	20,580	1,065
1977	638,503	331,139	334,990	494,658	106,201	150,564	44,464	123,800	136,935	22,679	3,394	16,336	1,050
1978	589,751	352,842	308,671	510,430	91,490	149,172	75,097	289,617	172,685	N.A.	5,453	39,341	1,340
1979	639,292	389,535	184,478	462,415	106,346	111,210	56,917	283,479	119,947	9,903	4,967	51,456	1,984
1980	548,882	358,181	357,488	584,280	133,933	194,994	127,981	281,605	147,670	17,830	3,300	45,795	3,278
1981	509,342	310,854	236,217	515,431	186,020	268,825	150,706	202,373	153,770	7,297	3,280	62,432	4,203
1982[1]	227,844	145,725	348,366	421,863	168,433	247,845	103,667	163,325	165,762	21,682	4,287	74,122	2,196
1983[2]			259,328			138,708		111,578		4,500	5,379	92,000	1,371

[1] Preliminary. [2] Estimate. [3] For consumption. [4] Natural & synthetic. *Source: Bureau of Mines* T.693

Tobacco

Responding to a 5 percent cut in the effective quota for flue-cured tobacco and a 7 percent increase for burley, tobacco growers indicated in early February 1984 that they intended to increase their total 1984 tobacco plantings by 1 percent to about 794,000 acres. The slightly larger acreage and a more normal yield would increase U.S. 1984 tobacco production 10 to 15 percent above the 1983 level of 1.41 billion pounds. Domestic tobacco supplies for 1984/85 would then nearly equal the 1983/84 level.

Under legislation enacted late in 1983, price supports for flue-cured tobacco were to remain the same as in 1982 and 1983. Price supports for burley were to have been as high as in the previous year. Because of large burley supplies, it was not thought likely that the supports would be increased. Price supports for other types of tobacco were not to be raised from a year earlier, but they could be reduced. The USDA sets grade loan rates for the various kinds of tobacco before the marketing season begins.

The drought-reduced 1983 crop lowered this season's domestic leaf supply to 5.3 billion pounds, 3 percent under the previous year. On January 1, 1984, non-farm stocks were 0.5 percent below a year earlier. With a drop in both domestic consumption and exports, total use of U.S. tobacco during 1983/84 was expected to fall 2 to 3 percent from 1982/83. It was also expected that, by October 1, carryover stocks of all tobacco could total about 3 percent below a year earlier.

In 1983, cigarette output dropped 4 percent to 667 billion. Both domestic use and exports also fell. As a reaction to increased prices, U.S. smokers consumed 600 billion cigarettes in 1983, about 5 percent less than the previous year and the lowest since 1974. Annual consumption per adult declined 7 percent to 3,494 cigarettes. Total cigarette use in 1984 was expected to rise because of a slowdown in the rate of price increases and the economic recovery. Consumption of smokeless tobacco and large cigars declined in 1983 and was expected to drop again in 1984.

In 1983, U.S. exports of tobacco leaf and products fell by 7 percent in value from the 1982 record level. At the same time, a smaller value was recorded in both manufactured and leaf tobacco exports. However, both categories recorded slightly higher prices. Exports of unmanufactured tobacco totaled 524 million pounds, or 630 million pounds, farm-sales weight. Export volume in 1984 was expected to increase only slightly because of competition from countries such as Zimbabwe and Brazil, and because of reduced consumption in the U.S. markets.

In 1983, unmanufactured tobacco imports and the Customs category for machine processed leaf (duty paid) rose by 30 percent to 527 million pounds. This record import figure exceeded export volume for the first time last year, primarily because of abnormally large clearances in August in anticipation of a Custom's reclassification of certain machine-threshed cigarette leaf tobacco. Imports in 1983 represented nearly a third of the tobacco used in U.S. cigarette production. About the same proportion of imports to use was expected for 1984.

Flue-cured tobacco disappearance in the 1983/84 marketing year was expected to decline from the previous season's 935 million pounds, because both exports and domestic use were expected to fall. Considering the smaller 1983 crop, the carryover of tobacco was expected to decline about 3 percent from the previous July's 2.21 billion pounds. Production in 1984 was expected to drop from the 1983 level of 818 million pounds.

Total disappearance of burley tobacco in the 1983/84 season was expected to decline from 579 million pounds in 1982/83, with a decline in both domestic use and imports. Burley sales in 1983/84 totaled about 524 million pounds, 33 percent less than the previous season. Sales in 1983/84 included 33 million pounds of 1982/83 carryover tobacco that was sold in October 1983. Burley carryover in October 1984 was expected to be 3 percent below a year earlier.

The USDA announced that the 1984 flue-cured tobacco national marketing quota would be 805 million pounds, down 105 million from the 1983 quota. It was expected that undermarketings would exceed overmarketings by 30 million pounds, thus making the 1984 effective quota about 835 million pounds or 52 million pounds under the 1983 effective quota. Farmers who produce less than their quota of tobacco in one year (an undermarketing) are allowed to "overmarket" the amount of the shortfall the following year. The national marketing quota for 1984-crop burley tobacco was set at 583 million pounds, 10 percent less than the quota for the 1983 crop. When adjustments for overmarketings and undermarketings are taken into account, the effective farm quota for 1984 burley was expected to total 708 million pounds, or about 10 percent more than the previous year.

The 1984 price support program was similar to the previous year's program. Price support was made available to eligible growers through loans to producer associations. To be eligible, producers were obliged to contribute to a no-net-cost fund or account established by the association. For 1984 the contribution from flue-cured growers had been set at 7 cents per pound of tobacco marketed, the same as for 1983. Unlike 1983, however, owners of flue-cured quota who leased it to others were not required to contribute to the fund. The no-net-cost contributions had not been set for burley and most other kinds of tobacco.

Growers of cigar binder and Ohio filler tobaccos voted in a mail referendum on February 27 to March 1 on whether they approved marketing quotas. Growers approved quotas for Ohio filler and binder and Wisconsin binder. Therefore, price supports are to be made available for their 1984, 1985 and 1986 crops. However, growers did not approve quotas for Connecticut binder, and so price support will not be available for it in those three years. Growers of flue-cured, burley, fire-cured, dark air-cured, and sun-cured tobaccos approved marketing quotas applicable to the 1984 crop in previous referenda. However, growers of Maryland and Pennsylvania filler tobacco were to have no supports because they turned down marketing quotas a year earlier.

TOBACCO

World Production of Leaf Tobacco In Thousands of Metric Tons[5] (Farm Sales-Weight[3])

Year	United States	Brazil	Canada	China	USSR	France	Greece	India	Indonesia	Italy	Japan	Pakistan[4]	Philippines	Turkey	World Total[1]
1971	1,712	432	225	1,781	604	96	184	798	173	166	328	336	155	383	9,865
1972	1,754	421	187	1,852	516	109	188	924	165	176	318	192	107	401	10,155
1973	1,744	399	257	2,103	672	112	202	821	287	207	347	139	168	334	10,670
1974[5]	906.1	225.5	116.5	983.8	313.0	51.7	81.1	462.1	78.3	92.7	151.3	64.6	88.4	203.5	5,185
1975	994.0	285.6	106.1	959.8	298.0	56.3	118.2	394.8	82.2	113.4	165.7	78.0	66.3	208.6	5,369
1976	971.0	276.1	81.5	1,370	318.0	61.4	140.0	349.8	88.4	108.6	176.2	60.7	89.0	324.0	6,038
1977	870.0	310.0	104.3	1,389	307.0	43.6	118.9	418.8	83.7	109.7	173.2	72.6	84.3	248.0	5,892
1978	919.8	330.0	115.6	1,452	282.0	50.5	130.3	493.6	82.5	109.7	172.0	76.3	79.2	292.6	6,097
1979	693.3	401.0	78.9	941.4	301.0	50.6	127.2	453.8	141.2	136.6	153.3	69.9	85.3	214.3	5,701
1980	809.7	350.0	107.9	845.0	290.0	46.5	116.8	438.5	117.6	125.5	141.4	71.0	78.2	228.3	5,225
1981	936.0	314.0	112.4	1,500	273.0	42.8	127.4	480.8	119.7	131.0	137.7	67.6	81.4	180.0	5,948
1982[2]	899.1	372.0	77.9	2,000	290.0	40.7	130.0	525.0	115.0	133.5	140.0	66.6	90.9	223.0	6,661.0
1983[1]	640.0														

[1] Estimated. [2] Preliminary. [3] Farm–Sales–weight is about 10% above dry weight which is normally reported in trade statistics. [4] Bangladesh (Formerly East Paskistan) excluded from 1972 to date. [5] Data prior to 1974 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.* T.694

Production and Consumption of Tobacco Products in the United States

	Production									Consumption[3] Per Capita[4]					
	Chewing Tobacco														
Year	Plug	Twist	Fine-cut	Loose-leaf	Total	Cigarettes	Cigars[2]	Smoking Tobacco	Snuff	Cigars[2]	Cigarettes	Cigars[2]	Cigarettes	Smoking Tobacco	Total Pdt.'s
	Million Pounds					Billion		Million Lbs.		Number		Pounds			
1971	20.6	2.4	5.1	43.2	71.4	576.4	6.71	60.5	26.4	119.2	4,037	1.94	7.75	1.06	9.52
1972	19.6	2.2	5.2	45.6	72.6	599.1	6.03	55.9	25.5	108.9	4,043	1.74	7.95	1.00	9.65
1973	18.6	2.2	5.7	47.6	74.0	644.2	5.66	53.0	25.3	102.4	4,148	1.61	7.92	.88	9.53
1974	18.0	2.2	6.2	52.9	79.2	635.0	5.28	49.0	25.0	91.9	4,141	1.47	7.90	.87	9.40
1975	18.1	2.3	7.3	53.7	81.5	651.2	4.52	46.2	24.4	82.4	4,123	1.32	7.73	.76	9.14
1976	16.7	2.3	8.4	56.3	83.7	693.4	4.18	44.6	24.8	75.0	4,092	1.20	7.35	.75	8.69
1977	16.4	2.2	10.1	61.3	90.0	665.9	3.93	40.7	24.6	67.9	4,051	1.13	7.21	.65	8.49
1978	15.9	2.1	12.0	64.6	94.6	695.9	3.80	36.4	25.1	63.4	3,967	1.05	6.89	.60	8.10
1979	15.3	2.0	13.3	71.7	102.3	704.4	3.60	32.8	23.7	56.0	3,861	.92	7.00	.51	8.12
1980	17.3	1.9	14.7	72.1	106.0	714.1	3.45	32.2	24.3	51.1	3,851	.84	6.79	.48	7.98
1981	17.9	1.8	15.2	70.3	90.0[5]	736.5	3.43	30.3	42.5[5]	48.9	3,840	.81	6.53	.46	7.60
1982	15.7	1.7	[5]	73.0	90.4[5]	694.2	3.20	28.3	43.8[5]	45.3	3,746	.74	6.48	.42	7.48
1983[1]	13.9	1.7	[5]	74.0	89.6[5]	685.0	2.97	28.5	46.0[5]	41.9	3,593	.69	6.22	.41	7.20
1984															

[1] Preliminary. [2] Large cigars & cigarillos. [3] Consumption of tax-paid tobacco products; Represents unstemmed equivalent of tobacco used in the manufacture of these products. [4] 18 years old & over. [5] New classifications. *Sources: Bureau of the Census; Internal Revenue Service* T.695

Production of Tobacco in the United States In Millions of Pounds

Year	Conn.	Florida	Georgia	Indiana	Kentucky	Maryland	Massachusetts	North Car.	Ohio	Pa.	South Car.	Tenn.	Virginia	Wisconsin	W. Virg.
1971	7.6	25.6	115.1	12.1	356.3	28.1	2.9	727.1	17.5	24.5	133.2	105.6	118.4	22.5	2.0
1972	5.6	23.5	115.2	15.5	446.7	23.8	1.9	680.4	22.5	18.2	131.1	124.7	112.1	18.7	3.3
1973	6.8	24.0	97.9	10.6	320.9	31.5	2.0	811.9	15.9	22.1	132.7	101.3	138.1	19.0	2.8
1974	7.9	27.8	161.4	16.7	452.0	30.2	2.4	789.2	23.1	26.0	172.0	110.9	141.6	18.5	2.9
1975	6.4	29.6	151.0	17.0	456.7	21.9	2.0	957.0	23.7	19.8	189.0	134.6	142.1	20.8	3.1
1976	7.2	30.8	123.8	18.2	497.4	29.9	1.8	902.9	23.3	23.6	153.4	139.7	153.9	20.2	3.2
1977	5.6	24.8	134.9	16.6	452.0	30.1	1.9	744.5	22.7	26.2	138.7	136.7	143.0	24.4	3.2
1978	5.0	22.1	125.7	15.5	469.7	30.6	1.5	849.7	22.5	25.2	150.5	142.1	135.2	20.3	2.7
1979	4.9	23.2	101.0	11.9	343.1	22.0	1.5	621.4	14.1	17.7	117.7	104.8	109.6	25.1	1.7
1980	5.3	20.4	110.6	16.8	420.7	25.3	1.9	762.4	20.0	24.7	125.5	111.9	106.9	26.0	1.8
1981	5.6	22.8	121.0	18.8	509.6	33.0	2.0	795.9	22.9	27.3	149.6	161.5	157.8	26.4	2.4
1982	4.2	21.0	105.5	20.2	577.1	37.5	.9	700.7	31.9	25.9	124.2	178.2	125.4	20.1	3.6
1983[1]	3.5	17.9	95.4	11.3	311.8	29.7	.8	544.6	17.6	22.8	112.1	119.8	98.5	16.1	3.3
1984															

[1] Preliminary. December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.696

U.S. Salient Statistics for Flue-Cured Tobacco (Types 11–14)

Crop Year	Acres Harvested 1,000	Yield Acre 100 Lbs.	Production	Stocks, July 1	Total Supply	Exports	Dom. Disappearance	Total Disappearance	Farm Price ¢ Lb.	Crop Value Mil. $	Parity Price[2]	Price Support Level	Placed Under Gov't. Loan	Under Loan July 1
			Millions of Pounds								¢ Lb.		Mil. Lb.	
1971	525.8	20.5	1,076	1,976	3,053	480	663	1,143	77.2	832	101.0	69.4	55.7	761.9
1972	513.6	19.7	1,022	1,910	2,932	519	664	1,183	85.3	864	106.0	72.7	24.3	617.8
1973	575.1	20.1	1,159	1,749	2,908	598	703	1,301	88.1	1,019	123.0	76.6	30.7	402.3
1974	616.3	20.1	1,245	1,607	2,852	548	652	1,201	105.0	1,307	136.0	83.3	23.0	276.7
1975	717.2	19.7	1,415	1,652	3,067	523	671	1,193	99.8	1,442	150.0	93.2	259.0	179.9
1976	666.6	19.7	1,316	1,898	3,214	514	634	1,148	110.4	1,453	155.0	106.0	277.3	359.2
1977	589.3	19.2	1,124	2,075	3,199	539	608	1,147	117.6	1,329	162.0	113.8	195.6	556.9
1978	602.1	20.5	1,206	2,052	3,258	599	584	1,183	135.0	1,663	176.0	121.0	64.1	534.0
1979	502.8	18.8	946	2,075	3,021	520	563	1,083	140.0	1,324	203.0	129.3	72.0	564.0
1980	555.1	19.6	1,086	1,965	3,052	509	530	1,039	144.5	1,569	222.0	141.5	137.2	554.4
1981	540.6	21.6	1,144	2,013	3,157	523	489	1,012	166.4	1,947		158.7	105.9	595.8
1982[1]	473.3	21.3	994	2,145	3,139	456	479	935	178.5	1,774		169.9	258.9	518.7
1983–4[3]	421.0	19.0	837	2,205	3,042							169.9		688.4
1984–5														

[1] Preliminary. [2] As of applicable date when support level was computed. [3] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.* T.697

U.S. Salient Statistics for Burley Tobacco (Type 31)

Crop Year	Acres Harvested 1,000	Yield Per Acre 100 Lbs.	Production	Stocks, Oct. 1	Total Supply	Exports	Dom. Disappearance	Total Disappearance	Farm Price ¢ Lb.	Crop Value Mil. $	Parity Price[2]	Support Level	Placed Under Gov't. Loan	Under Loan on Oct. 1
			Millions of Pounds								¢ Lb.		Mil. Lb.	
1971	213.5	22.1	473	1,346	1,818	55	515	570	80.9	382	104.5	71.5	.2	468.4
1972	235.6	25.5	590	1,249	1,839	75	535	610	79.2	476	111.0	74.9	22.9	327.6
1973	222.1	20.3	461	1,229	1,691	87	533	619	92.9	418	129.0	78.9	.7	276.7
1974	260.7	23.5	610	1,071	1,681	68	519	587	113.7	694	147.0	85.8	2.8	139.2
1975	282.2	22.7	638	1,094	1,733	92	510	603	105.5	673	158.0	96.1	50.7	12.0
1976	285.8	23.8	664	1,160	1,824	117	490	606	114.2	775	160.0	109.3	46.6	44.8
1977	268.6	23.0	613	1,217	1,830	117	495	611	120.0	741	166.0	117.3	57.0	54.9
1978	261.4	24.0	618	1,218	1,836	121	503	624	131.2	822	184.0	124.7	67.7	113.5
1979	238.1	18.7	446	1,212	1,658	133	499	632	145.2	700	210.0	133.3	7.3	155.4
1980	276.6	20.3	558	1,026	1,583	106	478	583	165.9	930	236.0	145.9	.0	66.3
1981	331.2	22.0	726	1,000	1,726	141	464	605	180.7	1,318		163.6	.8	0
1982[1]	340.3	23.8	777	1,121	1,898	130	460	590	181.0	1,406		175.1	269.2	.7
1983–4[3]	290.4	15.4	479	1,308	1,787							175.1		266.0
1984–5														

[1] Preliminary. [2] As of applicable date when support level was computed. [3] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.* T.698

Exports[1] of Tobacco from the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	39.3	32.3	52.4	44.5	47.4	39.8	35.4	41.8	76.8	3.5	2.4	59.6	474.2
1972	95.4	87.0	28.6	17.9	42.7	33.3	39.2	40.5	48.3	54.1	63.1	56.2	606.2
1973	43.1	45.3	45.6	43.6	46.2	45.3	40.1	40.6	54.6	70.2	81.9	56.6	613.0
1974	53.5	47.6	39.1	52.7	57.7	62.8	45.2	47.6	40.0	64.1	73.0	68.3	651.4
1975	57.1	33.5	52.5	46.7	44.2	32.1	23.2	39.5	44.9	52.7	73.9	62.9	563.0
1976	93.2	52.0	47.1	43.5	29.7	26.0	23.9	34.7	48.2	52.9	51.3	75.6	578.0
1977	76.8	53.0	54.7	31.3	38.0	41.5	49.7	47.5	66.3	17.9	49.5	102.4	628.6
1978	52.5	55.6	73.2	40.9	32.3	29.2	42.7	52.3	41.3	85.8	95.8	86.3	687.8
1979[2]	35.6	50.1	57.1	51.8	42.2	25.3	38.0	29.5	30.1	41.6	78.9	81.5	561.8
1980[2]	28.0	52.5	80.1	54.6	53.2	43.0	40.9	25.8	32.3	47.6	64.4	66.6	591.5
1981[2]	44.8	32.8	53.7	49.4	44.6	40.1	31.3	27.4	45.5	63.2	86.8	55.6	575.3
1982[2]	31.7	39.4	49.9	41.8	54.0	37.2	23.9	30.2	24.8	74.5	92.2	50.5	562.3
1983[2]	24.2	38.3	46.0	44.0	33.6	32.7	28.6	36.0	26.4	51.7	87.9		
1984													

[1] Represents unmanufactured tobacco, including stems, trimmings and scrap. [2] Preliminary. *Source: Department of Commerce* T.699

TOBACCO

Salient Statistics of Tobacco in the United States

Year	Acres Harvested 1,000 Acres	Yield Per Acre Lbs.	Production Million Lbs.	Farm Price ¢ Lb.	Farm Value Mil. $	Tobacco (July–June) Exports[2] Mil. Lbs.	Tobacco (July–June) Imports[3] Mil. Lbs.	U.S. Exports of Cigarettes Millions	U.S. Exports of Cigars & Cheroots Millions	U.S. Exports of Chewing Tobacco & Snuff Metric Tons[6]	U.S. Exports of Smoking Tobacco[7] Metric Tons[6]	Stocks of Leaf Tobacco[4] All Types Jan. 1 Billion Pounds	April 1	July 1	Oct. 1
1971	838	2,035	1,705	78.6	1,340	524.2	259.1	31,812	53	39	32,086	5,006	4,763	4,371	4,474
1972	842	2,076	1,749	83.0	1,451	569.1	250.3	34,602	75	42	30,425	4,828	4,531	4,186	4,405
1973	887	1,965	1,742	90.0	1,572	657.4	294.2	41,543	107	93	27,084	4,700	4,459	4,039	4,196
1974	963	2,067	1,990	108.6	2,160	604.0	322.4	46,901	86	121	39,848	4,409	4,215	3,762	4,123
1975	1,087	2,008	2,182	102.6	2,239	588.2	313.3	49,935	92	32	8,703	4,457	4,310	3,946	4,282
1976	1,047	2,041	2,137	112.5	2,404	581.8	293.7	61,370	124	34	6,680	4,738	4,568	4,166	4,608
1977	966	1,982	1,914	118.6	2,268	617.0	335.7	66,845	107	43	4,844	4,798	4,797	4,431	4,710
1978	964	2,101	2,025	132.4	2,679	671.9	359.7	74,359	166	47	1,578	5,008	4,781	4,451	4,728
1979	827	1,845	1,527	141.1	2,154	617.4	398.1	79,717	177	43	10,634	5,071	4,914	4,518	4,740
1980	920.5	1,940	1,786	152.3	2,720	553.4	439.8	82,000	200	124	3,250	4,974	4,608	4,284	4,548
1981	976.0	2,114	2,064	170.6	3,521	584.9	384.9	82,600	181			4,850	4,617	4,285	4,697
1982[1]	907.8	2,183	1,982	176.4	3,499	526.5	434.0	73,600	181			5,080	4,983	4,675	5,034
1983[1]	983.8	1,800	1,411					62,000	125			5,371		4,900	5,209
1984[5]	794.4											5,358			

[1] Preliminary. [2] Domestic. [3] For consumption. [4] Owned by dealer & mfgrs., converted to a farm-sales weight equivalent. [5] Farmers' intentions to plant, MARCH 1. [6] Data prior to 1975 are in THOUSANDS OF POUNDS. [7] In packages & in bulk. *Source: Agricultural Marketing Service. U.S.D.A.*

T.700

Tobacco Production in the U.S., by Types In Million Pounds (Farm–Sales Weight)

Types	11–14	31	32	21	22–23	35–36	37	41	42–44	72	51–52	54–55	61
1971	1,078	473	28.1	5.9	37.6	15.7	1.1	24.5	3.8	.2	2.8	22.5	12.4
1972	1,012	601	23.8	4.7	37.5	15.5	.8	18.2	4.2	.1	2.5	18.7	9.7
1973	1,157	450	31.5	5.7	27.7	12.4	.9	22.1	3.1	.2	2.7	19.0	9.8
1974	1,241	613	30.2	5.9	26.0	11.6	.9	26.0	3.1	.1	2.5	18.5	11.0
1975	1,415	639	21.9	4.9	32.6	14.0	.7	19.8	3.0	.1	2.4	20.8	7.7
1976	1,316	679	29.9	5.3	33.2	15.1	.8	23.6	2.8	.1	2.4	20.2	7.2
1977	1,130	617	30.1	7.2	45.2	20.4	.8	26.2	3.6	.1	2.5	24.4	5.3
1978	1,232	626	30.6	6.8	51.4	22.2	.9	25.2	3.0	.1	2.6	20.3	3.8
1979	946	446	22.0	5.4	39.6	16.1	.6	17.7	2.0	.1	2.4	25.1	4.0
1980	1,086	561	26.2	3.6	32.7	16.2	.4	24.7	2.4	.1	2.6	26.0	4.5
1981	1,170	730	46.4	5.2	32.4	15.7	.7	27.3	2.4	.1	3.5	26.4	4.1
1982	1,006	810	42.0	5.5	47.7	19.9	.7	21.4	3.5		3.5	20.1	1.6
1983[1]	818	470	37.9	4.8	30.7	12.1	.5	14.6	1.9		2.7	16.1	1.6
1984													

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.701

U.S. Exports of Unmanufactured Tobacco In Millions of Pounds (Declared Weight)

Year	Australia	Belg.-Luxem.	Denmark	France	W. Germany	Thailand	Ireland	Japan	Netherlands	Norway	Italy	Sweden	Switzerland	United Kingdom	Total U.S. Exports
1970	10.2	12.4	18.1	9.0	92.6	20.1	10.2	58.6	26.6	8.1	3.1	19.5	24.7	95.5	510.4
1971	10.9	15.6	16.7	10.1	100.0	18.9	9.0	18.6	28.1	4.3	16.4	14.7	18.2	89.8	473.3
1972	14.8	12.9	20.8	7.7	99.3	30.5	14.3	87.3	22.4	7.0	23.1	20.5	23.5	115.1	606.1
1973	13.9	16.7	37.0	6.6	99.9	8.6	8.9	79.0	31.6	5.7	21.8	17.1	31.4	119.7	612.5
1974	18.7	14.4	12.6	8.2	97.1	20.6	10.2	109.6	31.0	5.4	24.3	14.5	21.3	94.3	651.4
1975	15.5	8.1	16.4	9.5	91.0	18.7	8.2	81.5	29.9	5.6	31.5	15.3	25.9	78.5	563.0
1976	10.3	7.5	9.0	8.3	73.7	21.8	7.7	132.7	24.7	5.5	33.2	14.1	24.4	71.8	578.1
1977	14.2	10.4	16.9	6.3	78.9	16.0	5.4	135.4	30.5	6.0	40.6	11.8	28.8	46.8	628.6
1978	12.4	16.9	27.1	9.8	53.2	18.2	5.3	102.3	34.2	4.2	41.0	17.5	26.2	148.8	700.0
1979	12.4	5.4	16.4	11.5	67.7	18.8	6.9	95.9	29.3	5.7	34.8	13.7	19.3	68.2	567.4
1980	13.4	7.9	17.5	4.5	100.7	22.6	3.6	82.1	44.9	6.8	30.7	15.4	20.1	32.5	598.7
1981	12.6	9.5	11.1	6.1	83.2	18.4	3.9	117.0	28.6	4.2	26.5	9.9	22.2	39.4	584.5
1982[1]	10.1	15.2	16.8	5.3	68.2	27.7	4.7	110.3	25.1	3.6	28.1	8.7	26.7	30.7	572.0
1983															

[1] Preliminary. *Source: Bureau of the Census*

T.702

Tung Oil

Tung oil, an industrial oil produced from tung nuts, a tree crop, is used as a lubricant and also as a drying oil.

Estimated world production in calendar year 1983 totaled around 95,000 metric tons, 9 percent below 1982 output, according to *Oil World*. The People's Republic of China accounts for around three-quarters of estimated total world production. Argentina and Paraguay are also producers and exporters of tung oil.

World disappearance of tung oil, estimated at 102,000 tonnes in 1983, was 2 percent below the year-earlier level, but above production.

The estimated shortfall in calendar year 1983 world production of tung oil compared with estimated disappearance was made up by withdrawals from stocks, which dropped 24 percent, to around 13,000 tonnes at the end of 1983.

Supply and Distribution of Tung Oil in the United States In Thousands of Pounds

							Factory Consumption							
Year	Stocks Jan. 1	Production	Imports	Exports[2]	Total Supply	Appar. Disappearance	Total	Paint & Varnish	Linol. & Oilcloth	Printing Ink	Other	Resins & Plastics	Drying Oil Ind.	Oil Acquired By CCC
1971	47,710	100	22,239	1,962	68,087	23,282	27,200	17,100				3,700	23,000	3,800
1972	44,703	2,250	21,597	1,257	67,273	33,307	31,800	18,100				3,800	31,000	100
1973	33,986	500	21,796	1,955	54,327	28,589	31,000	20,000				4,000	28,000	2,300
1974	25,738	—	21,037	700	46,075	34,858	34,000	24,000				2,000	35,000	—
1975	11,217	—	30,063	1,700	39,580	33,228	43,000	26,000				4,000	33,000	—
1976[1]	6,352	—	34,509	1,600	39,261	36,961	25,000						35,000	—
1977[1]	2,300	—	18,821	1,200	19,900	16,900	20,100						19,000	
1978[3]	3,000		17,912				16,900	7,200			2,600	3,700		
1979[3]	1,200		20,038				15,700	10,400			2,300	3,000		
1980[3]	3,500		16,242				16,600	8,300			4,600	3,700		
1981[3]	2,800		15,036				14,600	5,800			5,600	3,200		
1982[3]	2,200		14,401											
1983[3]	2,217													
1984[3]	3,137													

[1] Preliminary. [2] Also including re-exports. [3] Estimate. *Source: Economic Research Service, U.S.D.A.* T.703

Average Price of Tung Oil[1] (Imported-Drums) F.O.B. New York In Cents per Pound

Year	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	24.0	23.9	25.4	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	25.6
1971	26.0	26.0	26.0	26.0	26.0	24.0	18.0	16.1	15.5	15.5	15.5	15.5	20.8
1972	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
1973	15.5	15.5	15.5	15.5	17.1	20.0	N.A.	N.A.	31.0	31.2	33.8	35.0	23.0
1974	35.0	36.0	39.0	39.0	38.3	35.5	35.5	35.5	35.0	35.2	38.9	41.0	37.0
1975	41.0	41.0	41.0	41.0	41.0	41.0	41.0	35.4	32.2	33.0	33.0	33.0	37.8
1976	33.0	33.2	34.0	34.0	33.8	37.0	54.0	65.0	65.0	65.0	65.0	65.0	48.7
1977	65.5	72.7	97.0	142.4	147.0	147.0	128.2	100.0	100.0	100.0	100.0	100.0	108.3
1978	100.0	100.0	100.0	100.0	100.0	100.0	100.0	87.5	87.5	87.5	68.5	66.4	91.4
1979	68.9	68.9	67.9	69.0	69.0	69.0	69.0	69.0	62.5	55.0	51.0	51.0	64.2
1980	51.0	55.1	55.8	53.0	51.1	48.3	45.2	43.7	46.6	56.5	65.5	67.2	53.3
1981	69.6	68.0	64.0	60.3	62.9	64.5	64.0	64.0	62.1	60.3	58.5	58.5	63.1
1982	61.4	69.5	68.2	66.5	68.3	69.4	66.9	63.5	60.6	60.5	60.5	60.5	64.6
1983	60.5	57.0	57.0	61.9	86.4	102.5	102.5	107.3	133.4	136.0	138.0	138.0	98.4
1984	138.0	138.0											

[1] Carlots, imported, f.o.b. New York. *Source: Economic Research Service, U.S.D.A.* T.704

Tungsten

Estimated world production and consumption of tungsten (in concentrate) each decreased about 18 percent in 1983 compared with 1982, as demand for tungsten in steel, mill products, and cemented carbides was reduced substantially, according to preliminary data of the U.S. Bureau of Mines.

U.S. production of tungsten (mine shipments) in 1983 dropped about 30 percent below the 1982 level. Three of the five major U.S. tungsten mines were temporarily closed at the end of November 1983, and for some months in the second half of 1983, North American mining was suspended due to weak demand and low prices.

Tungsten ores and concentrates are converted into intermediate products, including: ammonium paratungstate (APT), tungstic acid, sodium tungstate, tungstate metal powder, ferrotungsten, and tungsten carbide powder. Most of the APT is reduced to tungsten metal powder, which then may be processed into tungsten carbide powder or ferrotungsten.

Reliance of the U.S. on imports of tungsten concentrate has declined from around 58 percent of apparent U.S. consumption in 1979 to an estimated 39 percent in 1983 as the recycling of tungsten scrap has increased steadily. U.S. imports of concentrate in 1983 for consumption were 19 percent below the 1982 level. Imports from China dropped sharply. China is the world's largest producer of tungsten, and a major supplier to the world market. But, it is reported to be building two tungsten filament plants to satisfy growing domestic demand and appears to be concentrating on increasing its processing of tungsten concentrate in order to export more semi-finished products such as APT.

U.S. production of ammonium paratungstate (APT) increased by about 46 percent in 1983, while consumption declined by 9 percent. Stocks of APT at the end of December 1983, at 857 metric tons (contained tungsten) were 15 percent larger than a year earlier. U.S. production of tungsten products, primarily metal powder and carbide powder decreased by 7 percent in 1983, compared with 1982 production. Ending stocks of tungsten products were about three percent lower than at the end of 1982. U.S. stocks of tungsten concentrate at the end of December 1983 were 17 percent below 1982 ending stocks.

End uses of tungsten in the U.S. in 1983 were estimated as follows: metal-working and construction machinery—70 percent; transportation—12 percent; lamps and lighting—9 percent; electrical—5 percent; and other uses—4 percent. The segments of the U.S. economy which are important users of tungsten carbide metal cutting or drilling tools (heavy industry and oil production) appear to be slowly emerging from the recession, and demand for tungsten is expected to improve in 1984. In addition, the use of tungsten is increasing in electronic and office automation equipment.

The General Services Administration (GSA) in 1983 continued to offer excess tungsten concentrate for sale from the stockpile at a rate of 6 million pounds per year. The GSA offers about 500,000 pounds of contained tungsten a month, and in early 1984 was said to hold about 85.2 million pounds of contained tungsten, about 30 million pounds more than it is said to need. On bids opened on January 24, 1984 the GSA sold 289,160 pounds of stockpile-grade tungsten in concentrate at prices ranging from $74.17 to $78.18 per metric ton unit (mtu).

The weighted average price of tungsten concentrate in metric ton units of tungsten trioxide (WO_3), according to sales information from the International Tungsten Indicator, dropped from $92.25 in late December 1982 to as low as $73.43 in late December 1983, before recovering slightly to around $77.08 per mtu in late January 1984.

World Concentrate Production of Tungsten In Thousand Pounds of Contained Tungsten (60% WO_3 Basis)

Year	Japan	Argentina	Australia	Bolivia	Brazil	Burma	China	Rep. of Korea	Canada	Portugal	Spain	Thailand	USSR	United States	World Total
1971	1,609	304	3,184	4,608	2,989	842	15,400	4,784	3,667	2,176	897	5,527	15,400	6,900	78,055
1972	1,980	348	3,487	4,954	2,515	1,213	16,500	3,966	3,527	3,093	798	7,370	15,900	8,150	84,952
1973	2,072	183	2,917	4,264	2,194	1,133	17,600	4,504	3,680	3,336	690	5,295	16,300	7,575	83,612
1974	1,786	207	3,128	4,471	2,189	750	18,700	5,046	2,822	3,236	765	4,497	16,800	7,381	82,832
1975	1,693	190	4,145	5,661	2,496	1,091	19,800	5,298	2,584	3,139	774	3,609	17,200	5,588	84,508
1976	1,795	137	4,385	7,015	2,209	608	12,600	5,703	3,792	2,776	725	4,519	17,600	5,830	83,883
1977	1,702	154	5,198	5,355	2,672	613	19,800	5,809	3,995	2,216	677	4,859	18,100	6,008	90,541
1978	1,709	214	5,968	5,373	1,376	1,038	25,400	5,910	5,046	2,416	789	7,026	18,700	6,896	101,537
1979	1,645	130	7,039	5,445	2,057	1,526	28,900	5,981	5,726	3,060	869	4,026	19,200	6,643	106,937
1980	1,473	77	7,928	6,023	1,931	1,814	33,100	6,034	7,010	3,457	983	3,560	19,200	6,072	112,899
1981[1]	1,470	132	7,754	6,127	2,751	1,819	29,800	5,825	4,393	3,075	963	2,668	19,500	7,948	108,481
1982[1]	1,400	90	5,706	5,587	2,400	1,861	27,600	4,923	6,496	3,000	970	1,888	19,800	3,354	98,925
1983[2]			4,409	6,614	2,205	1,102	22,045	4,409	551	2,646		1,543	19,841	2,425	82,342
1984															

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

T.706

Salient Statistics of Tungsten in the U.S. In Thousands of Pounds of Contained Tungsten

			Consumption of Tungsten Products by End Uses											Stocks at End of Year (Concentrate)	
					Steel										
Year	Net Import Reliance as a % of Apparent Consumption	Production[1]	Shipments from Mines[1]	Total Consumption	Tool	Stainless & Heat Assisting	Alloy Steel[3]	Superalloys	Cutting & Wear Resistant Materials	Pdt's. Made from Metal Powder	Miscellaneous	Chemicals & Ceramic	Exports	Consumers & Dealers	Producers[1]
1971		6,900	6,827	11,622	1,420	187	149	209	5,082	2,044	—	381	2,006	2,657	863
1972		8,150	7,045	14,107	1,451	173	157	429	6,657	2,525	—	179	95	2,229	1,966
1973	66	7,575	7,059	15,386	2,015	211	353	606	10,000	2,660	—	444	90	1,446	225
1974	68	7,381	7,836	16,298	2,045	258	641	607	12,239	2,673	—	159	1,187	1,565	529
1975	55	5,588	5,490	14,012	892	158	139	379	8,355	1,490	—	310	1,316	1,958	531
1976	53	5,830	5,869	16,107	1,133	126	244	435	10,402	2,432	—	704	1,729	1,002	150
1977	52	6,008	6,022	17,100	1,124	175	262	527	10,880	2,482	—	275	1,283	826	124
1978	56	6,896	6,901	18,806	1,385	236	152	641	11,550	2,725	—	393	1,853	1,424	87
1979	58	6,643	6,646	21,589	1,554	305	173	596	12,969	3,348	—	506	1,929	1,538	84
1980	53	6,072	6,036	20,432	1,300	200	100	1,500	9,000	3,250	—	1,000	2,029	1,325	106
1981	50	7,948	7,815	21,692	947	101	66	439	13,732	3,855	706	849	175	1,480	239
1982[2]	46	3,354	3,473	9,935	392	55	26	659	8,023	3,353	413	729	672	2,891	120
1983[4]	39		2,425	8,113	220	68	7	355	3,093	3,025	831	143		2,392	
1984															

[1] Primary concentrates. [2] Preliminary. [3] Other than tool. [4] Estimate. *Source: Bureau of Mines* T.707

U.S. Imports[1] of Tungsten Ores and Concentrates and Ferrotungsten In Thousands of Pounds (Tungsten Content)

	Tungsten Ores and Concentrates Imported (For Consumption)												Ferrotungsten Imported			
Year	Australia	Bolivia	Brazil	Canada	South Korea	Mexico	Portugal	Spain	Thailand	Peru	Total 1,000 Pounds	Value Mil. $	Austria	France	West Germany	Total 1,000 Lbs.
1971	58	—	—	203	—	81	—	—		76	418	1.0	0	0	0	30
1972	392	780	124	1,634	370	90	9	—	883	814	5,739	12.1	25	10	88	814
1973	320	2,183	465	3,311	548	348	176	79	954	1,039	10,834	23.7	333	26	157	1,107
1974	87	2,065	266	1,633	364	336	1,635	95	1,527	1,375	11,096	40.7	235	112	—	808
1975	390	787	187	1,600	513	419	197	14	629	866	6,570	31.7	132	34	18	418
1976	172	580	2	1,343	202	417	420	21	588	863	5,301	28.3	260	246	53	844
1977	128	1,580	108	2,046	69	647	199	—	518	626	6,919	55.9	282	—	18	505
1978	211	2,012	2	3,030	230	850	—	—	840	180	9,138	67.7	241	110	63	575
1979	398	2,980	26	3,127	84	607	195	20	1,246	810	11,352	84.7	104	83	25	570
1980	235	2,794	63	2,914	19	515	576	94	1,046	526	11,372	87.1	68	10	17	446
1981	304	2,511	444	2,005	156	616	1,028	49	706	652	11,752	91.2	92	17	26	325
1982[2]	34	1,418	545	2,775	20	542	528	—	295	252	7,778	46.7	24	—	8	153
1983[3]	223	1,459	172	1,448	1,296	492	789		313	437	9,019					106
1984																

[1] Imports for consumption. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines* T.708

Tungsten Prices In U.S. Dollars

	Markets		Reported Value, F.O.B. U.S. Mine[2]				Markets		Reported Value, F.O.B. U.S. Mine[2]		
Year	U.S.[1]	European	Total (Mil. $)	Avg. per Unit of WO_3	Avg. per Lb. of Tungsten	Year	U.S.[1]	European[1]	Total (Mil. $)	Avg. per Unit of WO_3	Avg. per Lb. of Tungsten
1972			18.1	40.77	2.56	1978	128.19	130.43	56.7	130.29	8.22
1973			19.2	43.04	2.71	1979	127.31	125.95	55.8	133.13	8.40
1974			37.4	75.73	4.77	1980	131.07	129.87	50.6	132.90	8.38
1975			29.1	84.05	5.30	1981	130.25	129.16	62.2	126.29	7.96
1976	—	103.68	37.3	100.70	6.35	1982[3]	97.51	96.50	22.1	100.75	6.35
1977	148.88	155.03	55.1	145.03	9.15	1983[3]	84.00	81.00			

[1] Conc., Stu WO_3, Average (a short ton unit [stu] of tungsten trioxide [WO_3] contains 15,862 pounds of tungsten). [2] Values apply to finished concentrate & are in some instances f.o.b. custom mill. [3] Preliminary. *Source: Bureau of Mines* T.709

Turkeys

Since December 1983, turkey producers had been increasing the number of turkey poults placed for feeding, primarily because of strong turkey prices. This strength was expected to boost production of turkey meat by 2 to 3 percent in the second quarter of 1984 from the 582 million pounds produced in the comparable period in 1983.

Turkey meat output from federally inspected plants during January 1984 was down 5 percent from the 1983 level of 144 million pounds, while the February slaughter was estimated as steady or slightly higher. This meant that output of turkey meat during first-quarter 1984 could be down 3 percent from the 462 million pounds produced in the first quarter of 1983. Continued strong prices through first-quarter 1984 were expected to average around 67 cents per pound in the first quarter, while second-quarter prices were expected to average 67 to 71 cents per pound compared with 57 cents in 1983. The forecast of higher prices in second-quarter 1984, despite increasing production, was partly attributed to expectations of strong demand and higher prices for competing meats.

The 1983 turkey crop totaled nearly 170 million head, up 3 percent from 1982. Heavy breed turkeys increased 5 percent to 164 million, while light breeds continued their decline, dropping 27 percent to 6 million head. Turkey producers had negative returns during most of 1983. In the latter part of the year, producers in the 20 major turkey-producing states indicated that they planned to raise 2 percent more birds in 1984 than in 1983. Heavy breed intentions were up 3 percent, but light breeds were down by 39 percent. In recent months, producers reduced hatchery activity for turkey marketings during the first half of 1984. Poult placements in the second half of the year for domestic slaughter were 1 percent under a year earlier. The inventory of breeder hens in the 20 major producing states indicated a slower rate of increase in production of these hens. At the beginning of December 1983, the number of turkey breeder hens was 8 percent below a year earlier. During 1983, producers reduced production in the second half of the year in response to low product prices and soaring feed costs. Hatchery activity was expected to pick up by the second half of 1984 because of stronger product prices and generally steady feed prices.

Favorable prices to consumers stimulated excellent movement of turkey meat through retail channels late in 1983 and caused cold storage stocks of turkeys at the first of 1984 to drop well below the levels of a year earlier. As of January 1, 1984, cold storage stocks totaled 162 million pounds, 42 million less than the previous year and the lowest recorded since the 1981 level of 160 million pounds. Cold storage stocks continued to decline through first-quarter 1984 to 147 million pounds as of the first of March. Whole turkeys decreased the most, while cut-up turkeys declined by 6 million.

Salient Statistics of Turkeys in the U.S.

Year	Breeder Hens on Farms—Dec. 1 — Number	Breeder Hens on Farms—Dec. 1 — $ Value Per Head	Raised	(Liveweight) Produced Million Lbs.	(Liveweight) Price ¢ Lb.	Gross Income Million $	Ready-to-Cook Basis — Production	Ready-to-Cook Basis — Commercial Storage Jan. 1	Ready-to-Cook Basis — Exports & Shipments	Consumption — Military	Consumption — Civilian — Total	Consumption — Civilian — Per Capita Lb.	In Cents Per Lb. — Production Costs Live-Weight — Feed	In Cents Per Lb. — Production Costs Live-Weight — Total	Wholesale Ready-to-Cook — Total Costs	Wholesale Ready-to-Cook — 3-City Composite Price
	In Millions		In Millions	Million Lbs.	¢ Lb.	Million $	Million Pounds	Million Pounds	Million Pounds	Million Pounds	Million Pounds	Lb.				
1971	3.4	6.18	119.7	2,256	22.1	500	1,772	219	27	41	1,700	8.3				
1972	3.3	6.46	128.7	2,424	22.2	537	1,909	223	42	42	1,840	8.9	13.5	20.5	34.1	35.8
1973	3.6	9.47	132.2	2,452	38.2	936	1,933	208	54	31	1,775	8.5	25.6	33.1	50.6	64.2
1974	2.9	9.81	131.9	2,437	28.0	683	1,921	281	43	14	1,870	8.9	22.5	30.7	48.8	45.6
1975	3.1	10.81	124.2	2,277	34.8	793	1,803	275	53	19	1,811	8.6	22.1	30.7	49.4	55.1
1976	3.1	11.13	140.0	2,605	31.7	825	2,059	195	71	18	1,961	9.2	22.4	31.4	50.9	51.0
1977	3.0	11.39	136.4	2,562	35.5	910	2,023	203	56	11	1,992	9.3	22.6	31.6	51.4	56.2
1978	3.4	12.53	138.9	2,653	43.6	1,157	2,098	168	57	15	2,019	9.2	22.1	31.7	51.7	68.8
1979	3.7	13.57	156.5	2,958	41.4	1,226	2,343	175	57	19	2,204	9.9	25.3	35.8	58.2	67.0
1980	3.7	14.11	164.9	3,069	41.3	1,268	2,425	240	81	16	2,370	10.5	26.1	37.1	61.0	66.0
1981	3.5	15.35	159.9	3,263	38.4	1,247	2,574	198	68	15	2,450	10.7	30.2	41.2	66.1	64.0
1982[1]	3.4	14.60	164.5	3,155	39.5	1,246	2,522	238	56	12	2,489	10.8	24.5	36.3	60.1	63.6
1983[2]	3.2	17.59	169.8	3,316	38.0	1,261	2,635	204		13			26.6	39.8	65.4	63.5
1984																

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.* T.710

Turkey Per Capita Consumption in the U.S. by Quarters In Pounds

Year	First	Second	Third	Fourth	Total	Year	First	Second	Third	Fourth	Total
1972	1.1	1.3	2.2	4.4	9.0	1978	1.3	1.7	2.2	4.0	9.2
1973	1.2	1.3	2.1	3.9	8.5	1979	1.5	1.9	2.3	4.2	9.9
1974	1.2	1.6	2.0	4.1	8.9	1980	1.8	2.0	2.7	4.0	10.5
1975	1.1	1.4	2.0	4.1	8.6	1981	1.6	1.9	2.5	4.6	10.7
1976	1.2	1.5	2.1	4.4	9.2	1982[1]	1.8	2.1	2.7	4.3	10.8
1977	1.3	1.5	2.3	4.2	9.3	1983[1]	2.1	2.2	2.5		

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

T.711

Wholesale Price of Turkeys[3] (Hens; 8–16 lbs.) N.Y. In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Avg. Avg.	Hens (12–14 lbs.)	Farm Price[2]
1973	45.1	48.6	56.0	57.7	60.6	67.8	69.4	81.1	86.0	84.2	80.2	71.2	67.3	62.2	34.8
1974	60.7	54.2	51.9	45.3	48.4	52.5	52.6	55.8	55.7	54.4	56.3	58.8	53.9	51.7	28.8
1975	59.0	56.7	55.9	52.0	52.6	56.5	59.5	61.8	64.3	66.8	69.9	70.0	60.3	57.0	34.8
1976	69.0	69.0	69.9	70.0	70.6	71.0	71.0	71.0	71.0	71.0	72.8	73.0	70.8	52.4	31.7
1977	72.5	70.2	68.8	68.8	69.0	70.1	72.1	73.2	73.6	74.6	75.5	78.2	72.2	57.3	35.5
1978	78.5	78.5	78.9	79.0	82.2	86.1	86.8	87.0	87.0	89.1	91.6	90.7	84.6	70.3	43.6
1979	91.0	90.8	90.0	89.5	90.9	91.0	91.0	91.5	91.4	93.1	94.5	92.9	91.5	72.1	41.9
1980[1]	62.3	57.8	56.8	54.1	53.3	55.5	63.3	67.2	74.5	77.0	75.0	67.0	63.6	67.8	40.0
1981	59.4	60.7	63.8	61.2	63.5	66.2	66.8	61.8	59.5	56.4	57.3	51.7	60.7	64.7	38.4
1982	53.6	55.8	56.0	55.8	58.8	61.8	64.1	64.1	68.0	69.6	67.2	54.2	60.8		39.5
1983	53.6	54.9	56.0	54.4	56.6	60.9	58.5	57.6	65.0	65.1	67.0	76.1	60.5		36.1
1984															

[1] Prior to 1980 prices are for frozen eviscerated tom turkeys (N.Y.C.); heaviest weights. [2] Live turkeys. [3] Ready-to-cook. *Source: Economic Research Service, U.S.D.A.*

T.713

Certified Federally Inspected Turkey Slaughter in the U.S. In Millions of Lbs.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	69.7	41.6	45.3	55.8	84.2	142.9	185.0	234.1	212.3	272.6	269.9	174.6	1,788
1974	97.3	59.8	58.9	80.1	113.2	159.7	213.1	237.2	220.2	261.1	215.2	119.9	1,836
1975	64.9	47.1	54.4	68.7	81.9	138.4	193.2	203.3	229.0	257.5	220.2	157.5	1,716
1976	76.3	61.7	68.6	79.9	106.5	182.2	213.9	243.8	252.8	256.6	261.5	146.4	1,950
1977	70.5	58.7	80.3	78.9	110.0	176.5	189.6	244.4	238.2	250.3	246.8	148.2	1,892
1978	81.8	59.7	86.3	80.8	129.3	189.5	199.9	248.8	230.9	271.2	248.9	156.3	1,983
1979	99.3	77.2	96.0	112.3	157.3	195.9	219.2	267.7	233.0	297.5	261.9	165.5	2,182
1980		378.6			528.3			711.6			713.9		2,232
1981		398.1			553.2			785.2			772.6		2,509
1982		410.4			527.9			761.5			759.1		2,459
1983		462.2			581.5			760.3			759.0		2,563

Source: Economic Research Service, U.S.D.A.

T.714

Storage Stocks of Turkeys (Frozen) in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1973	208.1	188.4	152.6	115.4	91.3	88.1	137.1	199.4	261.2	350.7	450.5	321.1
1974	281.0	274.0	250.5	235.9	225.0	227.4	265.8	335.8	431.8	528.7	554.6	372.0
1975	275.0	267.1	239.9	207.3	180.2	162.7	193.2	248.6	328.6	409.8	472.4	286.2
1976	195.2	186.8	160.7	140.7	114.5	120.8	177.3	261.8	370.3	459.7	512.3	298.8
1977	203.4	190.3	167.8	142.3	130.3	138.2	201.4	253.6	329.9	409.3	444.5	269.4
1978	167.9	168.2	136.6	113.0	101.1	103.9	152.8	213.6	301.2	373.3	425.4	236.2
1979	175.1	170.7	154.7	135.7	128.0	153.1	200.9	272.5	382.5	432.3	445.5	281.2
1980	240.0	246.8	225.0	208.9	206.6	233.8	286.6	325.8	384.0	398.8	420.2	257.6
1981	198.0	208.3	207.9	220.7	228.7	256.2	327.3	400.8	466.0	532.1	[illegible]8.1	305.1
1982	238.4	236.9	236.4	232.8	—	—	281.7	—	—	435.8	—	—
1983[1]	203.9	193.8	187.7	185.3	192.3	210.5	255.7	323.5	384.3	432.2	460.1	251.6
1984[1]	161.8	161.5	145.8	149.4								

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.712

Uranium

Worldwide uranium production in 1983 reportedly totaled nearly 96 million pounds, a production level that exceeded consumption by 16 million pounds. The production surplus was added to world inventories of uranium that were already estimated to be sufficient to meet demand over the next five years. Partly because of increased output from Australian and Canadian mines, world uranium production in 1984 was estimated as increasing by 6 percent over the 1983 level to about 102 million pounds, according to trade reports.

By the end of 1983, reportedly, as many as eighteen nuclear power units on order or in the beginning stages of construction were canceled. A decline in the demand for enriched uranium was influenced by the strong dollar and the resulting inability of U.S. uranium suppliers to compete with foreign producers. The reduced demand for uranium was also partly attributable to a lowered demand for electricity. Consequently, the U.S. Energy Department cut its official prices for enriched uranium by 2 to 8 percent in order to increase the government's sales. At the same time, the Department liberalized the policy on contracts between the government and the nuclear generating plants that purchase enriched uranium. The proposed new contracts included fixed price ceilings adjusted for inflation and a "phasing out" of the premium prices that some utilities were charged for enriched uranium not ordered far enough in advance. Other proposed contract changes involved the removal of penalties on foreign utilities that purchase uranium without a U.S. export license.

However, spot prices for uranium reportedly fell to an 18-month low in the first quarter of 1984 because of continued expanding production and aggressive selling by the nuclear industry. Cash prices in the first quarter of 1984 were recorded as low as $17.50 per pound on the free market, 27 percent below $24 per pound six months earlier. Although this free market price reflected only about 5 percent of the worldwide uranium trade, it was said to be a major influence on the price of uranium sold under contract. The price of contractually-sold uranium had dropped from $30 per pound to below $25 in the past two years, according to one trade report.

When uranium prices fell below costs of production at many mines in the last half of 1983, some producers began to buy up surplus uranium and, at the same time, drastically reduced production in order to support prices. Industry sources admitted that world reserves of uranium ore and world production could potentially outrun demand well into the 80's. It was estimated that uranium producers in competition with the U.S.—notably Australia, Canada, and Africa—could probably continue to mine uranium at below $20 per pound. However, it was hoped that 1984 would bring some relief to the uranium-mining industry, mostly because of the prospects for economic recovery and for a growth in the demand for electric power during the year. Trade reports noted that the beginnings of economic recovery in 1983 had enabled the 80 nuclear reactors operating in the U.S. to break the 300 billion kilowatt-hour production mark. This represented a 9.5 percent growth rate in the production of electricity by nuclear energy. The Atomic Industrial Forum stated that, by the end of 1984, fourteen nuclear plants would be ready for authority to operate, and that licenses issued could possibly tie the record number of licenses set in 1974. The Forum estimated that at least three years of sustained growth would be necessary before nuclear utilities could consider additional generating capacity.

Free-World Production of Uranium Oxide (U_3O_8) Concentrate In Thousands of Short Tons

Year	Argentina	Australia	Canada	Spain	Namibia	Gabon	France	Portugal	Niger	Malagasy Rep.	Sweden	South Africa	United States	World Total
1973	.1	—	4.8	.1		.8	2.0	.1	1.2	—	.1	3.4	13.2	25.5
1974	[1]	—	4.8	.1		1.0	2.1	.1	1.5		.1	3.5	11.5	24.6
1975	[1]	—	6.1	.1		1.2	2.2	.1	1.8		.1	3.2	11.6	26.7
1976	[1]	.5	6.7	.2	.8	1.2	2.3	.1	1.9		.1	3.6	12.75	30.1
1977		1.0	7.0	.2	1.5	1.2	2.4		2.1			4.0	14.94	33.8
1978													18.49	43.0
1979													18.73	50.0
1980													21.85	
1981[2]													19.24	
1982														

[1] Less than 50 tons. [2] Preliminary. *Source: Bureau of Mines, Dept. of Energy* T.720

U.S. Salient Statistics of Uranium (Depleted) Nonenergy Data in Short Tons

Year	Production	Imports[3]	Exports	Apparent Consumption (Nonenergy)	Price, Derby Metal **$ Per Lb.**
1976	17,591	188	341	1,700	2.00
1977	18,822	453	273	2,000	2.50
1978	15,763	373	590	2,200	2.50
1979[2]	15,116	852	1,531	2,500	3.25
1980[1]	18,000	1,000	7,000	3,500	4.50
1981					

[1] Estimate. [2] Preliminary. [3] For consumption. *Source: U.S. Bureau of Mines, Dept. of Energy* T.721

Vanadium

Estimated world production of vanadium declined 10 percent in 1983 from 1982 output, according to preliminary data of the U.S. Bureau of Mines. The Republic of South Africa is the world's largest supplier of vanadium ores and slags, but its annual production is nearly matched by that of the USSR. However, most of the Soviet production is used domestically. The bulk of vanadium produced outside the United States is obtained from the reduction of iron ores. Vanadium is usually produced as a byproduct or coproduct of another element, such as iron, uranium, or phosphorus.

U.S. mine production of vanadium in 1983 was estimated by the U.S. Bureau of Mines around 5.1 million pounds (vanadium content), 48 percent less than in 1982. Four of the nine U.S. facilities that had produced vanadium oxides in 1981 were closed by the spring of 1983. The weak and slow recovery of the steel industry during the second half of 1983 provided little encouragement for producers and converters of vanadium oxides.

The U.S. now relies on net imports of ferrovanadium, vanadium pentoxide, and vanadium-bearing feed materials for around one-half of apparent consumption. There is very little vanadium recycled because more than 95 percent of the vanadium used is added as a minor alloying element to either steel, iron, or titanium. However, some vanadium is recovered from spent catalysts. U.S. imports of ferrovanadium in 1983 for consumption amounted to 1.7 million pounds (gross weight), about unchanged from 1982 imports. Canada was by far the most important supplier. Vanadium pentoxide imports in 1983 increased sharply, to more than 1.3 million pounds, from only 424,224 pounds in 1982. Finland accounted for most of these imports.

Consumption of vanadium in the U.S. declined 8 percent in 1982, to 6.23 million pounds of contained vanadium, according to Bureau of Mines preliminary data, primarily because of the sharpest drop in domestic steel production since the 1930–34 depression. The chief uses of vanadium are as an alloying agent for iron and steel, in the production of titanium alloys, and as a catalyst for production of sulfuric acid. Major end uses in 1983 were estimated by the Bureau of Mines as follows: transportation—35 percent; construction—29 percent; and machinery—21 percent. Consumption of vanadium is expected to increase at an annual rate of about 3 percent as demand increases for high performance materials, particularly for high strength low alloy (HSLA) steels. HSLA steels are favored for high-rise buildings, bridges, and pipelines because of the weight savings obtained.

Vanadium is classified as a strategic and critical material because of its significant import dependence and essential use in equipment for defense, energy, and transportation. As of November 30, 1983, the National Defense Stockpile goal was 15.4 million pounds of vanadium pentoxide, with an inventory of only 1.08 million pounds; and a 2.0 million pound goal for ferrovanadium, with none in the stockpile.

U.S. industry stocks of vanadium (pounds of contained vanadium) at the end of December 1983 were reported by the Bureau of Mines at 685,184 pounds, about 13 percent larger than at the end of 1982.

World Production of Vanadium from Ores and Concentrates In Short Tons (of Contained Vanadium)

Year	USSR	Chile	China	Finland	Australia	Norway	South West Africa[1]	South Africa	United States[1]	Other[4]	World Total
1976	8,800	1,199	N.A.	1,598	—	580	771	10,885	7,376		31,209
1977	9,500	950	N.A.	2,055	—	590	826	12,388	6,504	912	33,725
1978	10,000	760	2,200	3,092	—	510	485	12,400	4,272	1,697	35,416
1979	10,000	510	4,000	3,051	—	630	—	13,600	5,520	2,337	39,648
1980	10,500	300	5,000	3,135	—	540	—	14,000	4,806	2,230	40,511
1981	10,500	140	5,000	3,432	95	290	—	14,100	5,126	2,580	41,263
1982[2]	10,500	—	5,000	3,470	110	120	—	13,200	4,098	2,063	38,561
1983[3]	11,000		5,500	3,450	—			11,000	1,800		32,750

[1] Recoverable vanadium. [2] Preliminary. [3] Estimate. [4] Production from petroleum residues, ashes, & spent catalysts. Mainly in Japan & the United States. *Source: Bureau of Mines*

T.722

Salient Statistics of Vanadium in the United States In Short Tons of Contained Vanadium

	Vanadium in Ores & Concentrates		Prod. of Vanad. Pentoxide (V_2O_5)		Vanadium Consumed by Uses[2]										Exports	
Year	Mine Production	Recoverable Vanadium		Consumer Stocks Dec. 31	Tool Steel	Cast Irons	High Strength Low All.	Nonferrous Alloys	Chemicals	Carbon	Full Alloy	Total	$ Per Lb. Van. Pentoxide[3]	General Imports[5]	Ore & Concentrates[4]	Ferro-Vanadium (Gross Weight)
1976	8,076	7,376	11,063	1,080	565	61	1,636	313	212	516	1,311	4,720	2.90	2,998	99	1,210
1977	7,565	6,504	9,297	845	549	35	1,800	323	110	688	1,419	5,261	2.90	2,812	192	658
1978	4,446	4,272	9,290	974	858	59	2,440	467	123	1,051	1,506	6,630	3.17	2,234	1,721	1,309
1979	5,841	5,520	10,279	976	852	62	2,410	563	81	1,096	1,522	6,719	3.39	2,442	1,047	880
1980	5,832	4,806	9,829	879	653	54	1,986	728	59	1,114	1,420	6,139	3.54	1,786	960	803
1981	5,852	5,126	11,367	683	584	42	2,123	852	56	1,278	1,832	6,863	3.52	2,435	463	435
1982[1]	4,093	4,098	8,689	326	273	20	1,148	461	29	698	811	3,496	3.50	1,112	2,000	326
1983[6]		1,800		343	379	8	960	88	9	578	702	3,128	3.50	100	2,832	775

[1] Preliminary. [2] Represent about 90% of the total consumption. [3] Dealer export. [4] Also includes fused vanadium oxide. [5] Ores, slags, residues. [6] Estimate. *Source: Bureau of Mines*

T.723

Wheat and Flour

World wheat production in the 1983/84 season was estimated by the USDA in April 1984 at a record high 488 million metric tons, about 1.5 percent above the previous record large crop produced in 1982/83. Increased Chinese and Australian crops accounted for most of the increase in production, with China sharing the position of the world's largest producer with the perennial leader, the Soviet Union. The U.S., usually the second largest producer—dropped to third place.

Global world trade during the 1983/84 (July/June) marketing year was expected to be close to 101 million tonnes, up from 98.3 million estimated for 1982/83, and just short of the record 101.3 million tonnes traded in 1981/82. The U.S. was expected to continue in the lead as the world's largest exporter of wheat and flour, but its share of the world market was estimated to have dropped to about 38 percent of the total. In the 1978/79–1982/83 period, the U.S. share of world wheat and flour exports ranged from a 1978/79 high of nearly 45 percent to a low of slightly less than 41 percent in 1982/83.

The share of world wheat and flour exports accounted for by Canada, the second largest exporter, was expected to represent about 21 percent of the 1983/84 total, and within its most recent 5-year range of 18 to nearly 22 percent. The European Community (EC) share of the 1983/84 export market was estimated at about 15 percent compared with its 5-year range of 12 to 16 percent. Australia was expected to export over 11 percent versus the 1978/79–1982/83 range of 9 to 17 percent. And, Argentina was expected to increase its share to 9 percent of total world trade in wheat and flour, well above its range of 4 to more than 7 percent in recent years. The USSR was expected to maintain its position as the world's largest importer of wheat (around 20 million tonnes) in 1983/84, followed by China with a reduced 10 million tonnes, and Japan—with close to 6 million tonnes.

Global wheat consumption in 1983/84 was estimated by the USDA to reach a record-large 482 million tonnes, up from 469 million in the preceding season. Reduced world coarse grain production and supplies, coupled with ample wheat supplies at relatively low prices, encouraged heavy use of wheat for feed in many countries.

Despite higher world wheat consumption in 1983/84, ending stocks were estimated to increase to around 102 million tonnes from about 97 million a year earlier—and the highest in many years by a small margin. A carryover of this size would represent more than 21 percent of the season's estimated utilization, about the same as a year earlier—and the highest stocks/utilization ratio since the 24 percent for the 1978/79 marketing year.

U.S. wheat acreage for harvest in 1983 was 11 percent smaller than a year earlier, and the payment-in-kind (PIK) program encouraged a further cut, so that there were nearly 18 percent fewer acres for harvest than a year earlier. However, because of generally favorable growing conditions and the idling of less productive land, average yield increased to an all-time high of 39.5 bushels per acre—producing a 2.4 billion bushel crop, the third highest in history.

However, the 1983/84 U.S. supply picture varied by class of wheat. Hard Red Winter wheat production was smaller than a year earlier but total supply was about 9 percent larger due to higher beginning stocks. A substantial reduction in the Soft Red Winter wheat crop more than offset a small increase in carry-in and total supply was 13 percent below the 1982/83 total. The Hard Red Spring wheat production drop exceeded a larger carry-in than a year earlier and total supply was down 13 percent in 1983/84. Both carry-in and production of White wheat exceeded the 1982/83 figures and total supply increased 18 percent. Because of a sharp reduction in the 1983 crop, the total supply of Durum wheat decreased 17 percent in 1983/84.

Domestic use of wheat in 1983/84 was estimated to have increased nearly 24 percent, to 1.15 billion bushels, primarily because of an estimated increase of more than 200 million bushels in feed and residual use. Exports were estimated to have dropped close to 8 percent, to 1.4 billion bushels. Total use of wheat was estimated at 2.58 billion bushels, up from 2.44 billion in 1982/83. And, ending stocks were estimated at 1.41 billion bushels versus 1.54 billion a year earlier. Ending stocks in the farmer-owned reserve (FOR) were estimated at 600 million bushels versus 1.06 billion at the end of the 1982/83 season; CCC stocks were estimated at 190 million bushels versus 192 million; and "free" ending stocks for the 1983/84 season were projected at 602 million bushels compared with only 288 million at the end of the 1982/83 season. Ending stocks of Hard Red Winter wheat were estimated at 701 million bushels versus 756 million the previous year; Soft Red Winter stocks at 75 million bushels, unchanged from a year ago; Hard Red Spring stocks at 324 million bushels versus 426 million; White wheat stocks at 189 million bushels versus 143 million; and Durum 1983/84 ending stocks at 103 million bushels versus 141 million at the end of the 1982/83 season.

U.S. Government Support Program

In August 1983, the USDA announced the third consecutive yearly program to limit U.S. wheat production, under which growers could elect to participate in the 1984 acreage reduction program (ARP) and an optional payment-in-kind (PIK) program. Participants would be eligible for the price support loan program and would be protected by a fixed target price. The original sign-up period for participants was January 16 to February 24, and the program called for a target price of $4.45 per bushel and a national average loan rate of $3.30 per bushel. Required acreage reduction was 30 percent of base acres (the average considered planted to wheat in 1982 and 1983), with an optional diversion of an additional 10 to 20 percent of base acres and a PIK entitlement of 75 percent of the farm's established yield times the acres diverted. Under this initial program 53.38 percent of the base acreage was enrolled. Later, an additional sign-up period was permitted from April 16 to May 4, after some basic changes in the program were legislated. The target price was reduced to $4.38 per bushel. The reduced acreage requirement was lowered to 20 percent and 10 percent would be a paid land diversion with a rate of $2.70 per bushel. The 10 to 20 percent payment-in-kind option was unchanged from the initial program but the payment rate was increased to 85 percent of the established yield times the acres diverted. Haying and grazing was also authorized. An additional 13.8 percent in acreage was enrolled under the revised program, which brought base acres enrolled to 60.76 percent of the total 93.87 million base acreage.

Because the $3.51 per bushel national average farm price during June–October 1983 was below the $4.30 target price, eligible farmers received the maximum 65 cents a bushel deficiency payment rate on their 1983 crop wheat.

Futures Markets

Wheat futures in the U.S. are traded on the Chicago board of Trade, the Kansas City Board of Trade, the Minneapolis Grain Exchange, and the Mid-America Commodity Exchange in Chicago.

World Production of Wheat In Thousands of Metric Tons

Crop Year	Argentina	Australia	Canada	China	France	W. Germany	India	Italy	Pakistan	Spain	Turkey	Un. Kingdom	USSR	United States	World Total[1]
1978-9	8,100	18,100	21,100	53,800	21,056	8,118	31,700	9,191	8,400	4,795	13,300	6,615	120,800	48,300	446,800
1979-0	8,100	16,200	17,200	62,700	19,544	8,061	35,500	8,980	9,900	4,082	13,000	7,169	90,200	58,080	423,700
1980-1	7,780	10,856	19,158	55,210	23,683	8,156	31,830	9,150	10,857	6,039	13,000	8,472	98,200	64,618	442,400
1981-2	8,100	16,330	24,803	59,640	22,857	8,314	36,313	8,828	11,473	3,409	13,200	8,710	80,000	76,169	450,400
1982-3[2]	14,500	8,900	26,800	68,400	25,205	8,632	37,500	8,980	11,500	4,368	13,800	10,260	86,000	76,538	480,800
1983-4[1]	11,700	21,400	26,900	81,000			42,500				13,000		78,000	66,009	487,400

[1] Estimated. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.724

World Wheat Supply & Demand In Millions of Metric Tons/Hectares

	Area Harvested	Yield	Production	World Trade	Utilization Total	Ending Stks	Stocks as % of Util
1978/79	228.9	1.95	446.8	72.0	430.2	100.9	23.9
1979/80	228.5	1.86	424.3	86.0	444.1	81.1	18.4
1980/81	236.8	1.87	442.4	94.1	442.6	80.9	18.2
1981/82	239.7	1.88	450.0	101.3	445.5	85.4	19.3
1982/83[1]	239.1	2.01	480.4	98.3	469.2	96.7	21.0
1983/84[2]	227.8	2.14	487.9	100.9	482.3	102.2	21.3

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.724a

Salient Statistics of Wheat in the United States

Crop Year	Planting Intentions —1,000 Acres—	—Acreage Harvested— Winter	Spring	All	Avg.—All Yield Per Acre In Bushels	—Farm Disposition— Used for Seed	Fed to Livestock	Sold	Value of Production Ths. $	—Foreign Trade[5]— Domestic Exports[2]	Imports[3]	Per Capita[1] Consumption Flour	Cereal
		1,000 Acres				(Million Bushels)				Million Bushels		In Pounds	
1978-9	65,989	38,491	18,004	56,495	31.4	—— 83.2——		1,692	5,280,634	1,194	1.9	115	2.9
1979-0	71,424	43,427	19,027	62,454	34.2	—— 87.6——		2,046	8,070,378	1,375	2.1	117	2.9
1980-1	80,637	51,494	19,490	70,984	33.4	——104.2——		2,266	9,277,608	1,514	2.5	117	2.9
1981-2	88,928	58,647	22,359	81,013	34.5	——Not Available——			10,224,661	1,771	2.8	116	2.9
1982-3[4]	87,427	58,487	20,494	78,981	35.6				9,516,018	1,509	7.6	114	2.9
1983-4[4]	76,817	47,686	13,727	61,492	39.4				8,608,400	1,400	3.0		
1984-5[4]	82,607												

[1] Civilian only. [2] Includes flour milled from imported wheat. [3] Total wheat, flour & other products. [4] Preliminary. [5] Year beginning June. *Source: Economic Research Service, U.S.D.A.* T.728

Supply and Distribution of Wheat in the United States In Millions of Bushels

Crop Yr. Beginning June	Supply — Stocks, June 1 — On Farms	Mills, Elevators[3]	C.C.C.	Total Stocks	Production	Imports[4]	Total Supply	Domestic Disappearance — Food	Seed	Industry	Feed — Residual[5]	(On Farms Where Grown)	Total Dom. Disap.	Exports[4]	Total Disappearance
1978-9	492.9	683.8	—	1,176.7	1,775.5	1.9	2,955	592.4	87.0	.1	——157.6——		837.0	1,194.1	2,031
1979-0	484.3	439.8	—	924.1	2,134.1	2.1	3,060	596.1	101.0	—	—— 86.0——		783.1	1,375.2	2,158
1980-1	376.5	525.5	—	902.0	2,374.3	2.5	3,279	610.5	114.0	—	—— 51.7——		776.2	1,513.8	2,290
1981-2	414.3	574.5	—	988.8	2,798.7	2.8	3,791	602.4	112.0	—	——141.3——		855.7	1,770.7	2,626
1982-3[1]	581.0	582.9	—	1,163.9	2,812.3	7.6	3,984	616.4	97.0	—	——221.1——		934.5	1,508.6	2,443
1983-4[2]	694.9	845.8	—	1,540.7	2,425.4	3.0	3,969	625.0	105.0	—	——450.0——		1,080	1,400.0	2,580

[1] Preliminary. [2] Estimated. [3] Also warehouses and all off-farm storage not otherwise designated, including flour mills. [4] Imports & exports are for wheat, including flour & other products in terms of wheat. [5] Approximate feed use. *Source: Economic Research Service, U.S.D.A.* T.737

WHEAT AND FLOUR

Stocks, Production, and Exports of Wheat, by Classes In Millions of Bushels

Year Beginning June	Hard Spring			Durum[3]			Hard Winter			Soft Red Winter			White		
	June 1 Stocks	Production	Exports[2]	June 1 Stocks	Production	Exports[2]	June 1 Stocks	Production	Exports[2]	June 1 Stocks	Production	Exports[2]	June 1 Stocks	Production	Exports[2]
1975–6	104	327	160	26	123	52	225	1,058	581	37	326	165	43	288	215
1976–7	116	411	124	53	135	41	379	976	418	57	336	181	60	284	186
1977–8	250	399	156	92	80	62	606	997	535	72	349	197	93	221	174
1978–9	335	380	232	67	133	72	632	830	610	71	189	95	73	244	185
1979–0	320	363	217	86	106	83	423	1,089	725	27	317	154	68	259	196
1980–1	285	312	188	61	108	59	440	1,181	701	40	435	299	76	338	267
1981–2	257	468	205	60	186	82	541	1,117	754	38	676	460	93	352	270
1982–3[1]	348	500	239	108	148	59	539	1,255	679	60	613	325	109	296	207
1983–4[4]	426	313	225	141	73	65	756	1,193	700	75	511	210	143	335	200

[1] Preliminary. [2] Includes flour made from U.S. wheat & shipments to territories. [3] Includes "Red Durum." [4] Estimate. *Source: Economic Research Service, U.S.D.A.*

T.727

Seeded Acreage, Yield and Production of All Wheat in the United States

Year	Seeded Acreage—1,000,000 Acres				Yield Per Harvested Acre—in Bushels				Production—1,000,000 Bushels			
	Winter	Not Durum	Durum	All	Winter	Not Durum	Durum	All	Winter	Not Durum	Durum	All
1975	56.0	14.1	4.8	74.8	32.0	26.8	26.4	30.6	1,642.9	360.7	123.4	2,126.9
1976	57.8	17.8	4.7	80.4	31.5	26.8	29.4	30.3	1,564.1	449.7	134.9	2,148.8
1977	56.5	15.8	3.2	75.4	31.6	28.4	26.4	30.7	1,540.4	425.1	80.0	2,045.5
1978	47.5	14.3	4.1	66.0	31.8	30.0	33.1	31.4	1,222.4	419.8	133.3	1,775.5
1979	51.8	15.6	4.0	71.4	36.9	28.2	27.1	34.2	1,601.2	426.2	106.7	2,134.1
1980	57.6	17.5	5.5	80.6	36.8	25.3	22.4	33.4	1,895.4	370.5	108.4	2,374.3
1981	66.0	17.1	5.9	88.9	35.9	30.7	32.3	34.5	2,103.5	509.3	185.9	2,798.7
1982	66.5	16.6	4.4	87.4	36.1	34.0	35.0	35.6	2,111.8	553.0	147.5	2,812.3
1983[1]	62.5	11.7	2.6	76.8	41.8	31.7	29.6	39.4	1,993.9	358.5	73.0	2,425.4
1984[2]	64.9				38.2				1,979.4			

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

T.726

Production of Winter Wheat in the United States In Millions of Bushels

Year	Colorado	Idaho	Illinois	Indiana	Kansas	Michigan	Missouri	Montana	Nebraska	Ohio	Oklahoma	Oregon	Pa.	Texas	Wash.	Total U.S.
1975	55.6	36.1	67.5	61.6	350.9	34.2	48.5	105.0	98.2	70.6	160.8	54.1	10.1	131.1	137.0	1,642.9
1976	51.6	39.2	72.2	54.0	339.0	33.1	58.1	98.6	94.4	64.0	151.2	56.1	9.0	103.4	132.7	1,564.1
1977	56.1	32.4	67.5	55.8	344.9	33.0	68.6	81.2	103.3	72.4	175.5	45.2	8.9	117.5	95.2	1,540.4
1978	57.3	41.8	33.4	28.9	300.0	16.4	28.6	83.7	81.6	42.1	145.8	47.3	7.1	54.0	117.0	1,222.4
1979	67.6	35.7	53.8	44.4	410.4	31.6	70.4	57.4	86.7	63.4	216.6	48.0	7.3	138.0	94.6	1,601.2
1980	107.2	51.9	75.4	53.9	420.0	35.2	89.0	54.8	108.3	67.1	195.0	72.0	9.3	130.0	143.0	1,895.4
1981	83.9	55.7	92.5	62.1	305.0	41.5	115.5	89.3	104.4	72.6	172.8	73.2	9.7	183.4	161.3	2,103.5
1982	84.0	52.4	67.5	46.4	462.0	24.6	75.8	80.6	101.5	55.0	227.7	60.5	8.2	144.0	125.4	2,111.8
1983[1]	117.0	55.6	65.8	49.5	448.2	35.8	70.3	79.1	98.9	58.7	150.5	62.0	8.6	161.0	159.3	1,993.9

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

T.734

United States Official Winter Wheat Crop Production Reports In Thousands of Bushels

Crop Year	Previous December	May 1	June 1	July 1	August 1	Sept. 1	Current December	Final
1975–6	1,599,527	1,619,776	1,618,598	1,636,524	1,634,227	1,650,037	1,651,209	1,642,900
1976–7	1,495,869	1,458,996	1,416,000	1,530,124	1,542,660	1,542,330	1,566,074	1,564,118
1977–8	1,438,015	1,477,455	1,526,000	1,539,029	1,526,029	1,528,844	1,526,713	1,540,419
1978–9	1,321,068	1,284,375	1,308,000	1,801,705	1,248,405	1,243,685	1,248,272	1,222,446
1979–0	1,441,306	1,390,848	1,427,000	1,560,768	1,602,901	1,595,591	1,608,897	1,601,234
1980–1	1,567,817	1,711,010	1,757,170	1,848,000	1,870,000	1,878,000	1,891,251	1,895,383
1981–2	1,977,079	2,078,137	2,013,607	2,092,692	2,064,845	2,059,205	2,098,719	2,103,538
1982–3	2,128,133	2,063,336	2,131,214	2,124,854	2,095,554	2,106,149	2,108,246	2,111,806
1983–4	Discontinued	1,893,241	1,882,916	1,937,388	1,963,243	1,976,843	1,993,888	
1984–5		1,979,366						

Source: Crop Reporting Board, U.S.D.A.

T.736

Production of All Spring Wheat in the United States In Millions of Bushels

	Durum Wheat							Other Spring Wheat										
Year	Arizona	California	Minnesota	Montana	North Dakota	South Dakota	Total Durum	Colorado	Idaho	Minnesota	Montana	North Dakota	Oregon	South Dakota	Utah	Washington	Total U.S.
1974			2.4	5.1	70.8	2.9	81.2	.7	22.1	77.4	36.9	136.5	5.4	29.9	1.7	13.2	325.1
1975			2.8	10.1	104.9	4.4	123.4	.7	24.0	83.7	40.8	156.3	4.0	35.1	1.5	10.9	360.7
1976	23.9		2.7	8.6	90.5	1.6	134.9	1.6	29.2	123.5	60.2	193.6	4.2	20.5	1.3	11.3	449.7
1977	6.1		2.8	4.8	60.5	3.3	80.0	1.1	18.4	125.6	44.9	167.0	2.4	51.7	.6	6.1	425.1
1978	6.4		3.8	8.7	102.1	3.8	133.3	2.0	33.6	87.8	53.7	180.1	4.6	44.0	1.4	11.2	419.8
1979	5.3		2.8	6.8	84.5	3.6	106.7	2.6	38.4	85.8	52.3	165.1	9.3	46.0	1.6	23.4	426.2
1980	12.4	7.8	3.4	7.6	73.2	4.1	108.4	3.1	44.2	96.9	57.4	105.5	5.4	37.4	1.4	17.2	370.5
1981	18.3	14.7	5.4	11.0	130.8	5.8	185.9	4.0	34.1	134.0	72.5	197.4	4.2	52.8	1.4	7.0	509.3
1982	7.0	11.6	3.0	10.2	112.1	3.5	147.5	3.5	41.8	120.8	92.8	213.9	4.0	58.8	1.7	13.4	553.0
1983[1]	5.0	6.3	1.2	4.1	54.3	2.1	73.0	5.1	36.1	75.1	53.7	135.0	3.6	36.4	1.4	10.1	358.5

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.735

Wheat Under Price Support Through the End of the Month (Cumulative Total from Current Season's Crop) In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1974–5	14.2	22.2	28.8	31.3	31.8	33.8	35.6	36.1	36.3	36.4	36.4	36.5	36.5
1975–6	12.5	16.4	18.8	23.8	26.4	39.3	45.8	46.8	47.4	47.8	47.8	47.8	47.8
1976–7	8.3	22.0	44.0	82.2	148.1	226.1	278.7	300.7	341.5	363.1	424.7	468.3	468.3
1977–8	186.9	327.2	406.7	438.7	462.8	478.7	509.2	523.6	556.4	572.6	579.5	582.1	582.1
1978–9	53.0	105.7	154.6	183.1	202.5	213.4	237.5	242.8	251.0	254.0	254.3	255.0	255.0
1979–0	6.5	30.1	55.6	82.8	103.3	115.5	138.2	145.4	161.0	176.4	179.4	180.5	180.5
1980–1	35.7	56.6	99.2	126.5	142.2	183.3	228.6	261.0	297.4	328.0	328.0	329.4	329.4
1981–2	84.6	164.4	254.8	296.1	314.1	344.7	392.3	411.7	427.4	443.3	444.5	445.8	
1982–3	106.7	206.5	335.2	414.0	467.2	501.1	579.1	606.1	629.4	638.6	640.9	643.4	
1983–4	196.3	335.2	357.5	462.8	494.7	520.4	571.5	595.4	619.2				

Source: Economic Research Service, U.S.D.A. T.729

United States Grindings of Wheat by Mills In Millions of Bushels (of 60 Pounds Each)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1974–5	42.2	45.6	47.0	51.5	47.0	44.3	43.9	39.7	42.8	46.4	45.7	44.4	540.5
1975–6	47.4	49.0	51.2	54.1	45.2	46.0	50.0	47.3	51.7	49.9	49.5	50.4	575.2
1976–7	52.1	57.8	55.3	54.2	50.3	49.7	50.9	50.8	57.6	49.2	49.7	49.1	591.7
1977–8	46.1	54.8	52.2	52.4	53.2	52.1	48.4	48.9	54.8	50.5	53.6	51.5	606.9
1978–9	49.7	56.1	50.5	55.3	52.9	48.9	51.0	48.3	52.6	50.3	55.2	50.3	621.1
1979–0	52.1	59.0	52.4	58.9	55.7	50.6	55.0	50.4	49.1	47.2	49.8	47.8	628.0
1980–1	51.8	53.0	54.8	58.4	54.6	56.9	53.9	51.1	55.3	53.4	52.2	52.6	648.0
1981–2	51.2	53.3	54.6	55.6	51.0	50.2	53.7	52.8	56.7	50.3	49.0	50.2	628.6
1982–3[1]	52.3	55.8	54.3	56.3	53.8	54.8	54.8	52.7	59.1	53.9	58.1	56.7	662.6
1983–4[1]	55.2	65.0	61.9	58.3									

[1] Preliminary. *Source: Bureau of the Census* T.744

U.S. Wheat Foreign Trade and Domestic Disappearance In Millions of Bushels

	Imports (Grain Only)					Exports (Grain Only)					Domestic Disappearance				
Year Begin. June	June-Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total	June-Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total	June-Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total
1974–5	2.1	.6	.4	.2	3.3	330	283	255	150	1,019	232	172	191	78	672
1975–6	.7	.7	.3	.6	2.4	428	344	247	154	1,173	245	156	202	119	722
1976–7	.9	.4	.3	1.1	2.7	399	220	179	152	950	226	187	214	127	754
1977–8	.8	.4	.4	.3	1.9	382	225	279	238	1,124	373	183	189	114	859
1978–9	.6	.5	.5	.3	1.9	493	309	225	168	1,194	327	195	177	138	837
1979–0	.7	.5	.5	.4	2.1	511	388	283	194	1,375	277	167	209	130	783
1980–1	.8	.6	.7	.4	2.5	518	371	400	224	1,514	286	198	175	117	776
1981–2	.7	.8	.8	.5	2.8	622	427	441	281	1,771	431	131	181	113	856
1982–3[1]	1.2	3.0	2.7	.7	7.6	546	293	442	228	1,509	445	177	204	109	935
1983–4[1]	1.2	.9				475	363				526	280			

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.730

WHEAT AND FLOUR

Exports of Wheat (Only) from the United States In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1974–5	82.8	91.6	86.0	91.3	98.3	82.3	108.4	71.3	65.2	77.0	65.3	77.2	996.7
1975–6	99.7	111.2	125.5	123.6	117.8	92.3	91.6	72.4	76.4	76.8	67.8	66.7	1,121.8
1976–7	85.4	113.0	109.9	98.7	53.3	56.9	49.0	57.7	50.7	68.1	66.4	75.6	884.7
1977–8	82.8	93.4	108.5	68.3	56.7	86.7	64.6	94.5	103.3	101.8	118.8	108.8	1,088.2
1978–9	106.1	131.9	118.3	113.0	92.3	90.0	70.4	67.1	75.5	77.0	76.8	102.2	1,120.6
1979–0	133.3	117.8	129.6	149.0	108.9	114.9	82.7	89.5	94.7	98.3	88.6	96.2	1,305.5
1980–1	123.6	139.6	136.0	116.2	112.2	131.9	129.9	124.4	128.8	127.7	76.0	124.5	1,470.8
1981–2	138.1	145.4	194.1	156.9	127.5	137.4	124.2	138.7	159.1	147.4	114.8	155.7	1,739.3
1982–3	117.9	124.0	130.8	98.5	94.1	88.5	143.1	146.3	131.1	111.8	95.3	112.0	1,393.0
1983–4	115.8	87.5	119.2	114.8	102.3	128.4	118.3						

Source: Department of Commerce T.738

United States Wheat and Wheat Flour Imports and Exports In Thousands of Bushels

	Imports					Exports						
	Wheat					Public Law 480						
Year Beginning June	Suitable for Milling	Unfit for Human Consumption	Flour (Wheat Equivalent)	Other Pdt's.[2] (Wheat Equivalent)	Total	Sales for Foreign Currency[3]	Long-Term $ & Conver. for Cur. Credit Sales	Gov't. to Gov't. Donations[4]	Donations Thru Voluntary Relief Agencies	Barter for Strategic Materials	Mutual Security (A.I.D.)[5]	Total Specified Gov't. Programs
1974–75	1,734	109	387	1,134	3,364	—	*102,269*	*6,705*	*7,873*	—	—	*116,847*
1975–76	631	344	92	1,307	2,374	—	105,861	2,734	7,046	—	8,348	123,989
1976–77	1,298	20	32	1,381	2,731	—	133,504	8,887	17,842	—	15,836	158,277
1977–78	424	2	20	1,475	1,921	—	119,225	6,313	11,487	—	12,520	149,545
1978–79	18	15	45	1,772	1,850	—	126,819	5,968	9,808	—	243	142,838
1979–80	155	50	62	1,869	2,136	—	107,288	8,724	7,064	—	2,147	125,218
1980–81	128	58	200	2,148	2,534	—	101,052	9,659	7,158	—	153	118,022
1981–82[1]	59	14	357	2,423	2,853	—	109,995	6,838	6,332	—	—	123,165
1982–3					8,000							

[1] Preliminary. [2] Includes macaroni, semolina & similar pdt's. [3] Authorized by title, I, P.L. 480. [4] Author, by title II, P.L. 480. [5] Foreign Assist. Act of 1961. *Source: Economic Research Service, U.S.D.A.* T.732

Wheat Stocks in the United States In Millions of Bushels

	On Farms				Off Farms				Total Stocks			
Year	Jan. 1	Apr. 1	June 1[2]	Oct. 1	Jan. 1	Apr. 1	June 1[2]	Oct. 1	Jan. 1	Apr. 1	June 1[2]	Oct. 1
1974	364.4	181.7	89.5	680.5	564.0	366.4	158.2	881.7	928.3	548.1	247.7	1,562.1
1975	446.3	274.1	132.7	755.5	661.2	388.0	194.3	1,129.0	1,107.5	662.1	327.0	1,884.5
1976	547.6	342.6	235.5	833.3	838.0	594.2	429.8	1,354.9	1,385.7	936.8	665.3	2,188.2
1977	665.4	511.0	426.3	1,035.1	1,116.4	878.5	685.9	1,365.3	1,781.8	1,389.5	1,112.2	2,400.4
1978	831.3	639.9	492.9	1,033.7	1,162.5	887.8	683.8	1,104.2	1,993.8	1,527.7	1,176.7	2,137.9
1979	814.4	633.3	484.3	1,030.1	816.4	596.2	439.8	1,240.7	1,630.8	1,229.4	924.1	2,270.8
1980	773.9	569.6	376.5	974.7	942.2	655.5	525.5	1,497.6	1,716.2	1,225.1	902.0	2,472.3
1981	753.4	538.9	414.3	1,206.2	1,149.7	789.8	574.5	1,529.0	1,903.2	1,328.6	988.8	2,735.2
1982	955.6	748.4	581.0	1,421.2	1,222.4	808.7	582.9	1,566.0	2,178.0	1,557.1	1,163.9	2,987.3
1983[1]	1,166.2	886.4	694.9	1,248.8	1,354.5	990.7	845.8	1,717.3	2,520.7	1,877.1	1,540.7	2,966.1
1984[1]	1,015.9	771.5			1,310.5	981.3			2,326.4	1,752.8		

[1] Preliminary. [2] Data prior to 1976 are *as of July 1.* *Source: Crop Reporting Board, U.S.D.A.* T.731

Commercial Stocks of Domestic Wheat[1] in the United States, at First of Month In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1974–5	162.9	253.1	217.4	267.5	276.3	256.6	217.8	179.3	149.5	126.6	105.3	83.0
1975–6	172.5	313.9	380.2	415.8	398.0	338.1	274.7	238.8	220.1	209.0	179.6	168.7
1976–7	291.9	420.3	461.6	504.9	477.5	432.3	416.5	388.2	370.0	350.4	332.7	320.6
1977–8	383.9	469.3	526.5	509.0	488.0	460.2	418.6	385.4	355.8	321.5	281.9	240.5
1978–9	250.9	305.6	319.9	318.9	272.0	246.9	223.1	199.1	181.1	166.6	144.7	131.0
1979–0	197.0	326.8	360.0	371.4	338.2	302.9	274.5	259.0	253.4	228.1	200.3	184.2
1980–1	283.9	432.6	502.4	505.9	490.5	458.1	412.2	347.9	299.4	243.4	194.9	194.4
1981–2	312.2	427.0	472.0	487.4	476.9	425.8	395.6	352.4	285.1	254.3	218.2	204.9
1982–3	256.8	401.4	471.5	500.7	493.9	454.2	442.5	404.9	360.4	333.8	300.9	267.5
1983–4	285.0	403.1	462.1	477.0	442.0	385.4	334.9	294.9	273.0	255.1	236.6	

[1] Domestic wheat in store in public and private elevators in 39 markets and wheat afloat in vessels or barges at lake and seaboard ports, the first Saturday of the month. *Source: Department of Agriculture* T.746

United States Wheat Quarterly Supply and Disappearance In Millions of Bushels

	Supply				Disappearance							Ending Stocks		
					Domestic Use									
Year & Begin. June 1	Beginning Stocks	Production	Imports[2]	Total Supply	Food	Alc. Beverages	Seed	Feed[3]	Total	Exports[2]	Total Disappearance	Gov't. Owned[4]	Privately Owned[5]	Total Stocks
1977–8	1,113	2,046	1.9	3,161	586.5	.1	80.0	192.5	859.0	1,124	1,983	45.7	1,132	1,178
June–Sept.	1,113	2,046	.8	3,160	193.3	[6]	32.0	148.1	373.4	381.7	775.1	8.2	2,396	2,405
Oct.–Dec.	2,405	—	.4	2,405	153.5	[6]	23.0	6.0	182.5	225.4	407.9	31.8	1,965	1,997
Jan.–Mar.	1,997	—	.4	1,997	145.5	[6]	1.0	42.4	188.9	278.6	467.5	44.8	1,485	1,530
Apr.–May	1,530	—	.3	1,530	94.2	[6]	24.0	–4.0	114.2	238.2	352.4	45.7	1,132	1,178
1978–9	1,178	1,776	1.9	2,955	592.4	.1	87.0	157.6	837.0	1,194	2,031	50.2	873.9	924.1
June–Sept.	1,178	1,776	.6	2,954	191.7	[6]	27.0	108.0	326.7	493.3	820.0	48.9	2,085	2,134
Oct.–Dec.	2,134	—	.5	2,134	153.8	[6]	34.0	7.0	194.8	308.8	503.6	49.5	1,581	1,631
Jan.–Mar.	1,631	—	.5	1,631	147.8	[6]	1.0	28.6	177.4	224.5	401.9	49.5	1,180	1,229
Apr.–May	1,229	—	.3	1,230	99.1	.1	25.0	14.0	138.1	167.5	305.6	50.2	873.9	924.1
1979–0	924.1	2,134	2.1	3,060	596.1	—	101.0	86.0	783.1	1,375	2,158	141.7	760.3	902.0
June–Sept.	824.1	2,134	.7	3,059	198.5	[6]	33.0	45.6	277.1	511.0	788.1	49.9	2,221	2,271
Oct.–Dec.	2,271	—	.5	2,271	157.9	[6]	37.0	–27.7	167.2	387.9	555.1	49.6	1,667	1,716
Jan.–Mar.	1,716	—	.5	1,717	145.1	[6]	1.0	62.8	208.9	282.7	491.6	63.3	1,162	1,225
Apr.–May	1,225		.4	1,226	94.6	.1	30.0	5.3	129.9	193.6	323.5	141.7	760.3	902.0
1980–1	902.0	2,374	2.5	3,279	610.5	—	114.0	51.7	776.2	1,514	2,290	199.7	789.1	988.8
June–Sept.	902.0	2,374	.8	3,277	197.2	[6]	38.0	51.2	286.4	518.4	804.8	202.1	2,270	2,472
Oct.–Dec.	2,472	—	.6	2,473	167.1	[6]	44.0	–12.8	198.3	371.4	569.7	203.5	1,700	1,903
Jan.–Mar.	1,903	—	.7	1,904	150.1	[6]	1.0	23.7	174.8	400.4	575.2	203.2	1,125	1,329
Apr.–May	1,329	—	.4	1,329	96.1	[6]	31.0	–10.4	116.7	223.6	340.3	199.7	789.1	988.8
1981–2	988.8	2,799	2.8	3,791	602.4	[6]	112.0	141.3	855.7	1,771	2,627	190.3	973.6	1,164
June–Sept.	988.8	2,799	.7	3,788	202.5	[6]	37.0	191.7	431.2	621.8	1,053	191.3	2,544	2,735
Oct.–Dec.	2,735	—	.8	2,736	159.0	[6]	46.0	–74.4	130.6	427.4	558.0	188.7	1,989	2,178
Jan.–Mar.	2,178	—	.8	2,179	151.7	[6]	1.0	28.0	180.7	441.0	621.7	189.1	1,368	1,557
Apr.–May	1,557	—	.5	1,558	89.2	[6]	28.0	–4.0	113.2	280.5	393.7	190.3	973.6	1,164
1982–3[1]	1,164	2,812	7.6	3,984	616.4	[6]	97.0	221.1	934.5	1,509	2,443	192.0	1,349	1,541
June–Sept.	1,164	2,812	1.2	3,977	206.4	[6]	37.0	201.1	444.5	545.6	990.1	190.6	2,797	2,987
Oct.–Dec.	2,987	—	3.0	2,990	161.8	[6]	40.0	–24.8	177.0	292.6	469.6	185.4	2,335	2,521
Jan.–Mar.	2,521	—	2.7	2,523	151.4	—	1.0	51.8	204.2	442.1	646.3	185.2	1,692	1,877
Apr.–May	1,877	—	.7	1,878	96.8	—	19.0	–7.0	108.8	228.3	337.1	192.0	1,349	1,541
1983–4[7]	1.541	2,425	3.0	3,969	625.0		105.0	450.0	1,080	1,400	2,580			1,389
June–Sept.	1,541	2,425	1.2	3,967	210.1	—	37.0	278.8	525.9	475.3	1,001	157.5	2,808.6	2,966
Oct.–Dec.	2,966	—	.9	2,967	160.0	—	45.0	74.9	279.9	362.6	642.5	165.6	2158.9	2,325
Jan.–Mar.														
Apr.–May														

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[1] Preliminary. [2] Imports & exports include flour and other products expressed in wheat equivalent. [3] Residual. [4] Uncommitted, Gov't. only. [5] Includes total loans. [6] Less than 50,000 bushels. [7] Projected. *Source: Economics Research Service, U.S.D.A.* T.740

Wheat Government Loan Program Data in the United States Loan Rates (Cents Per Bushel)

										Total Stocks Ending May 31						
													Outstanding		Privately Owned	
Crop Year Beginning June	Total Support Rate	National Avg.[1]	Target Rate	Corn Belt (Soft Red Winter)	Central & So. Plains (Hard Winter)	Pacific North-West (White)	Placed Under Loan	Put in Reserve (June 1)	Repaid Loans (June 1)	Delivered to CCC	Ending Carry-over	CCC Uncommitted	Loans	Reserve	Sealed Under Bond	Other
							Millions of Bushels									
1972–3	172	125	47	163	150	148	143.0			24.1	597.1	6.3			11	454.1
1973–4	146	125	21	131	124	125	59.9			—	340.1	.6			—	339.0
1974–5	205	137	68	139	139	141	36.5			0	435.0	—			—	430.7
1975–6	205	137		138	138	142	47.8			0	665.3	—			—	665.3
1976–7	229	225		227	225	232	498.8	216.1	234.7	48.0	1,113		—	7.4		1,113.2
1977–8	247	225	290	226	219	231	590.8	195.0	393.6	2.2	1,178		—	17.3		1,132.1
1978–9	340	235	340	234	228	241	255.1	23.9	231.2	—	924.1		—	14.6		873.9
1979–0	340	250	340	248	243	257	180.5	39.7	140.8	—	902.0		—	24.3		760.3
1980–1	363	300	363	300	294	308	329.4	205.1	123.2	—	988.8		1.1	198.1		789.1
1981–2[2]	381	320	381	320	313	329	452.2	239.8	180.7	61.1	1,164		15.6	235.7		973.6
1982–3[2]	405	355	405	356	336	365	604.9	573.1	9.9	9.3	1,541		48.6	563.1		1,348.7
1983–4[3]	430	365	430	366	356	375				192.0	1,389		65.3	1,060.5		

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[1] The national average loan rate at the farm as a percentage of the parity-priced wheat at the beginning of the marketing year. [2] Preliminary. [3] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.* T.741

Wheat Supply and Distribution in Canada, Australia and Argentina In Millions of Metric Tons

	Canada (Yr. Beg. Aug. 1)					Australia (Yr. Beg. Dec. 1)					Argentina (Yr. Beg. Dec. 1)				
	Supply			Disappearance		Supply			Disappearance		Supply			Disappearance	
Crop Year	Stocks Aug. 1	New Crop	Total Supply	Domestic	Exports[1]	Stocks Dec. 1	New Crop	Total Supply	Domestic	Exports[1]	Stocks Dec. 1	New Crop	Total Supply	Domestic	Exports[1]
1973–4	9.9	16.2	26.1	4.6	11.4	.6	12.0	12.6	3.5	7.0	.3	6.6	6.9	4.2	1.6
1974–5	10.1	13.3	23.4	4.6	1.07	2.0	11.4	13.4	3.1	8.6	1.0	6.0	7.0	4.5	1.8
1975–6	8.0	17.1	25.1	4.6	12.3	1.7	12.0	13.7	2.3	8.7	.7	8.6	9.3	5.4	3.2
1976–7	8.2	23.6	31.8	5.0	13.4	2.7	11.7	14.4	2.8	9.5	.7	11.0	11.7	4.2	5.9
1977–8	13.3	19.9	33.2	5.1	16.0	2.1	9.4	11.5	2.2	8.4	1.6	5.7	7.3	4.3	1.8
1978–9	12.1	21.1	33.2	5.3	13.1	.8	18.1	18.9	2.6	11.7	1.2	8.1	9.3	4.1	4.1
1979–0	14.9	17.2	32.1	5.5	15.9	4.6	16.2	20.8	3.3	13.2	1.1	8.1	9.2	4.0	4.8
1980–1	10.7	19.2	29.9	5.0	16.3	4.4	10.9	15.3	3.6	7.1	.4	7.8	8.2	3.9	3.8
1981–2	8.6	24.8	33.4	5.2	18.4	4.6	16.4	21.0	3.9	12.1	.4	8.3	8.7	4.3	3.6
1982–3[2]	9.8	26.8	36.6	5.1	21.4	4.9	8.9	13.8	4.1	7.3	.8	14.5	15.3	4.4	7.8
1983–4[3]	10.0	26.9	36.9	5.1	21.5	2.4	21.4	23.8	3.3	13.0	1.1	11.7	12.8	4.5	7.6
1984–5	10.3					7.5					.7				

[1] Including flour. [2] Preliminary. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.725

Comparative Average Cash Wheat Prices In Dollars per Bushel

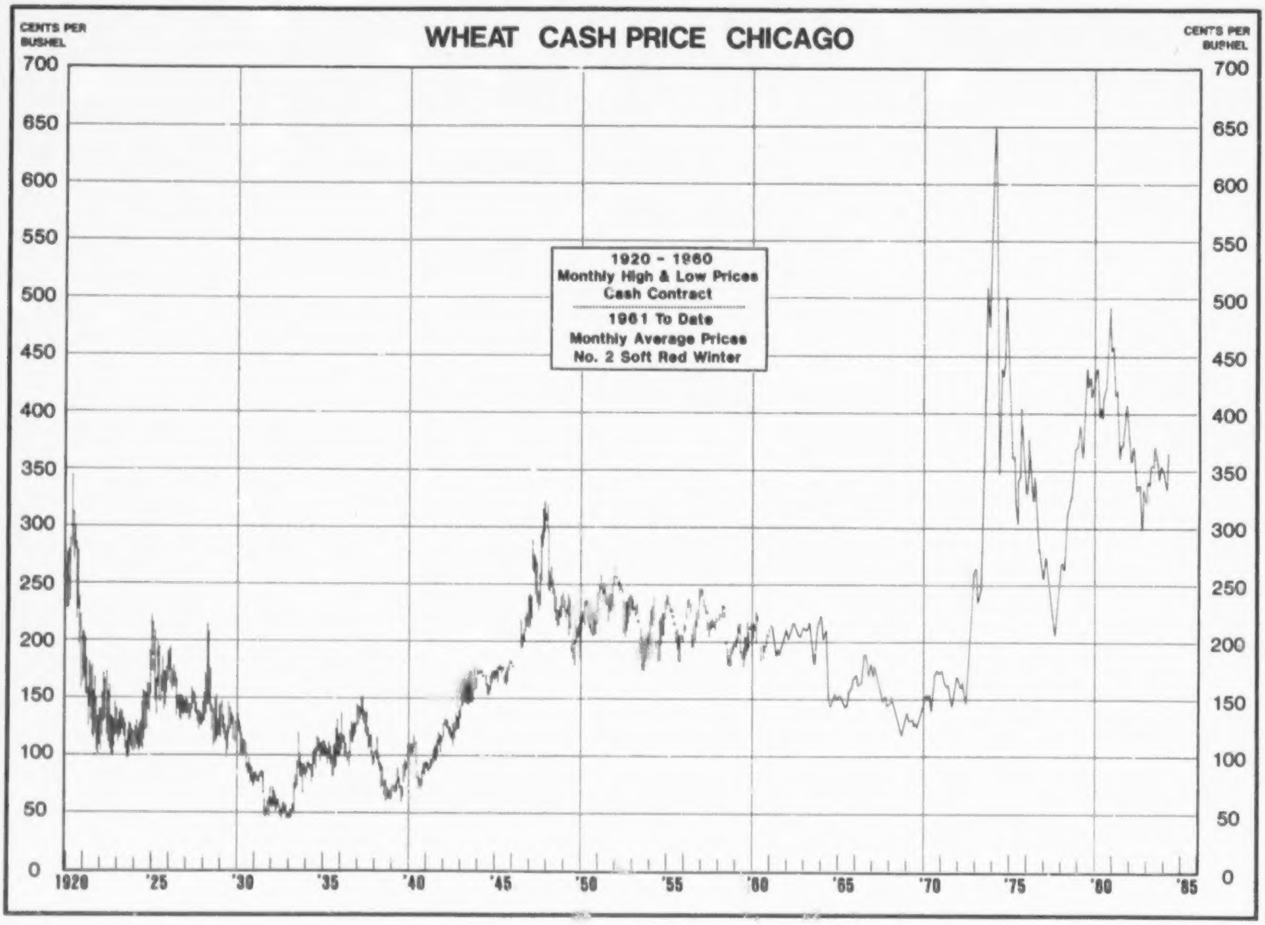
Crop Year—June to May[3]	Received by U.S. Farmers	No. 2 Soft Red Winter Chicago	No. 1 Hard Red Ordin. Prot. Kansas City	No. 2 Soft Red Winter St. Louis	No. 1 Hard Winter Denver	Minneapolis No. 1 Dark Northern Spring	Minneapolis No. 2 Hard Amber Durum	No. 1 Soft Portland Oregon	No. 2 Western White Pacific N.W.	No. 2 White Scft Toledo	Export Prices ($ per Metric Ton) Gulf No. 1 H.R. Winter Ports	Export Prices ($ per Metric Ton) Gulf No. 1 Soft Red Win.	Export Prices ($ per Metric Ton) Portland No. 2 White West.
1972–3	1.76	2.23	2.33	2.24	1.92	2.21	2.17	2.47	2.48	2.28			
1973–4	3.95	4.93	4.51	4.61	4.00	4.73	6.76	4.81	4.81	4.80	4.85		
1974–5	4.09	4.09	4.20	4.03	3.76	4.96	6.44	4.37	4.55	3.89	4.46		5.05
1975–6[3]	3.56	3.54	3.74	3.46	3.33	3.74	5.16	3.88	3.95	3.36	4.05		4.47
1976–7	2.73	2.81	2.88	2.78	2.38	2.96	3.30	3.10	3.16	2.75	115		116
1977–8	2.33	2.56	2.72	2.54	2.16	2.66	3.37	3.09	3.15	2.48	110		116
1978–9	2.97	3.57	3.38	3.43	2.77	3.17	3.66	3.73	3.80	3.54	135		140
1979–0	3.78	4.24	4.25	4.10	3.54	4.16	5.09	4.22	4.38	4.06	171	164	161
1980–1	3.91	4.33	4.45	4.39	3.78	4.46	6.81	4.36	3.94	4.07	178	171	166
1981–2[1]	3.65	3.74	4.27	3.66	3.61	4.17	4.61	4.20	3.82	3.70	171	144	158
1982–3[1]	3.55	3.32	3.94	3.32		3.94	4.25	4.39	3.93	3.33	158	128	165
1983–4[2]	3.65												

[1] Preliminary. [2] Estimate. [3] Data prior to 1975–6 are for crop year July to June. *Source: Economic Research Service, U.S.D.A.* T.733

Commercial Stocks of Canadian Wheat[1] in Canada, at First of Month In Thousands of Metric Tons[2]

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1971–2	334.4	304.6	311.2	316.4	312.1	296.0	306.6	302.5	290.8	275.7	265.2	255.0
1972–3	287.2	276.2	290.4	277.4	293.8	292.6	291.5	285.7	264.2	218.7	214.0	178.1
1973–4	172.8	205.1	192.3	208.2	213.3	198.7	185.6	177.9	194.0	197.7	181.5	171.6
1974–5	211.0	241.9	217.1	222.4	203.9	204.0	202.8	199.3	192.0	198.3	167.7	151.9
1975–6	163.3	190.7	183.0	207.2	219.6	220.8	217.2	209.9	203.1	187.3	178.0	151.5
1976–7	153.6	183.5	185.6	222.8	223.9	244.2	253.0	236.7	233.7	220.5	208.5	189.8
1977–8[2]	4,905	4,985	5,477	6,263	6,358	5,948	5,645	5,108	5,159	5,194	4,987	4,711
1978–9	5,612	6,251	6,045	5,596	5,131	5,034	5,113	4,799	4,799	4,894	4,637	4,147
1979–0	4,810	5,149	5,581	5,990	5,992	5,754	6,172	6,069	5,731	5,260	4,620	4,539
1980–1	4,210	5,659	4,963	4,997	5,137	5,338	5,292	5,234	5,288	5,130	4,719	3,939
1981–2	4,311	5,697	5,742	5,924	5,082	5,829	6,131	5,526	5,953	5,718	4,820	4,294
1982–3	5,768	5,948	5,767	7,941	8,091	7,223	7,618	7,761	7,086	6,571	6,285	5,552
1983–4	6,547	7,448	7,523	7,713	6,525	6,327	7,532	7,477	7,106	6,837	7,352	
1984–5												

[1] Canadian wheat in Canada exclusive of farm stocks, first Wednesday of month. [2] Data prior to July 1977 are in millions of bushels. *Source: Board of Grain Commissioners of Canada* T.747



Average Price of No. 2 Soft Red Winter (30 Days) Wheat at Chicago In Dollars per Bushel

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
1970–1	1.41	1.45	1.52	1.67	1.74	1.77	1.74	1.75	1.74	1.70	1.67	1.61	1.67
1971–2	1.64	1.54	1.45	1.45	1.53	1.60	1.71	1.69	1.61	1.62	1.66	1.63	1.58
1972–3	1.46	1.53	1.76	2.02	2.11	2.28	2.60	2.65	2.47	2.37	2.45	2.71	2.31
1973–4	2.82	3.08	4.75	5.11	4.75	5.47	5.84	6.30	6.50	5.59	4.33	3.48	4.93
1974–5	3.91	4.40	4.34	4.41	5.03	4.86	4.69	4.02	3.84	3.62	3.63	3.25	4.09
1975–6	3.03	3.42	3.82	4.06	3.84	3.49	3.32	3.45	3.78	3.66	3.34	3.30	3.54
1976–7	3.47	3.37	3.01	2.89	2.72	2.60	2.66	2.73	2.74	2.63	2.53	2.35	2.81
1977–8	2.29	2.20	2.08	2.20	2.27	2.59	2.65	2.69	2.64	2.82	3.11	3.14	2.56
1978–9	3.18	3.22	3.32	3.42	3.51	3.68	3.68	3.73	3.88	3.79	3.60	3.86	3.57
1979–0	4.36	4.39	4.23	4.28	4.30	4.13	4.26	4.36	4.39	4.18	3.96	4.04	4.24
1980–1	3.96	4.17	4.21	4.38	4.70	4.92	4.54	4.57	4.34	4.15	4.18	3.80	4.33
1981–2	3.60	3.70	3.70	3.87	3.97	4.08	3.86	3.77	3.57	3.59	3.70	3.43	3.74
1982–3	3.31	3.36	3.35	3.18	2.98	3.33	3.23	3.32	3.40	3.36	3.51	3.55	3.32
1983–4	3.53	3.59	3.71	3.62	3.56	3.42	3.55	3.47	3.34	3.57	3.65		

Source: Agricultural Marketing Service, Grain Division, U.S.D.A. T.745

WHEAT AND FLOUR

Average Price of No. 1 Hard Winter (Ordinary Protein) Wheat, at Kansas City In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1972–3	158	182	210	215	225	262	267	248	242	251	263	269	233
1973–4	290	467	501	467	478	522	568	582	501	407	359	405	462
1974–5	436	433	435	494	488	466	415	393	369	366	334	323	413
1975–6	361	412	421	409	371	350	357	381	381	361	357	375	374
1976–7	363	321	301	277	262	264	270	273	263	252	236	231	288
1977–8	235	231	247	256	281	280	282	284	307	321	312	312	272
1978–9	314	314	324	342	348	339	342	350	352	353	364	417	338
1979–0	434	412	426	439	453	451	433	432	407	390	410	407	425
1980–1	421	431	445	470	489	454	460	447	435	448	436	424	445
1981–2	425	414	419	431	446	435	433	426	425	428	422	406	427
1982–3	374	370	375	361	386	398	400	408	418	421	405	392	392
1983–4	371	388	390	384	382	385	381	371	385	393			

Source: Agricultural Marketing Service, U.S.D.A. T.739

Average Price of No. 1 Dark Northern Spring Wheat at Minneapolis (14%[1] Protein) In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1972–3	174	196	209	214	222	242	242	229	233	239	257	280	228
1973–4	307	450	480	450	448	498	552	583	533	441	423	507	473
1974–5	536	507	520	563	562	538	480	449	453	456	443	430	494
1975–6	469	490	512	503	474	446	454	470	466	448	465	475	469
1976–7	444	379	356	341	330	314	313	315	313	309	291	271	348
1977–8[1]	254	248	275	287	296	292	294	290	303	323	327	321	288
1978–9	311	313	326	341	347	332	330	336	342	345	373	432	335
1979–0	442	419	429	445	429	417	407	408	402	396	431	433	421
1980–1	469	455	456	482	495	477	481	478	467	480	477	456	471
1981–2	450	425	423	429	438	422	428	421	416	425	420	413	429
1982–3	416	396	402	400	408	396	393	392	408	440	440	439	411
1983–4	438	434	430	433	425	421	417	408	424	437			

[1] Prior to 1977–8, prices are for 15% protein. *Source: Agricultural Marketing Service, U.S.D.A.* T.742

Average Price[1] Received by Farmers for Wheat in the U.S. In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[2]
1972–3	132	151	173	189	197	238	238	197	206	215	215	243	176
1973–4	247	445	462	422	420	478	529	552	496	398	352	357	396
1974–5	404	424	432	485	487	465	411	395	365	369	347	292	404
1975–6	333	389	411	402	358	341	343	366	365	350	343	346	355
1976–7	333	297	288	259	246	239	243	247	243	237	219	203	273
1977–8	204	213	216	230	246	247	253	259	267	282	282	281	233
1978–9	281	288	292	299	304	301	299	299	297	301	320	372	298
1979–0	389	374	387	398	394	381	374	378	364	358	369	369	382
1980–1	381	394	399	419	432	422	421	417	409	407	395	370	396
1981–2	362	362	365	377	385	380	378	370	367	368	364	339	368
1982–3	326	334	338	343	348	351	357	357	366	375	375	350	352
1983–4	334	361	365	361	354	348	350	340	349	360			

[1] Weighted average by sales. [2] Includes an allowance for unredeemed loans at average loan values. *Source: Statistical Reporting Service, U.S.D.A.* T.743

Stocks of Wheat Flour Held by Mills in the United States In Thousands of Sacks (100 Pounds)

Year	Jan. 1	April 1	July 1	Oct. 1	Year	Jan. 1	April 1	July 1	Oct. 1
1970	4,595	4,237	4,227	4,438	1977	1,334	4,248	4,167	3,537
1971	4,329	4,732	4,586	4,861	1978	4,160	4,096	3,459	3,342
1972	4,362	4,542	4,379	4,886	1979[1]	3,214	3,477	3,895	3,813
1973	4,746	5,581	5,393	4,174	1980[1]	3,975	3,323	4,268	3,716
1974	5,505	5,297	3,748	3,885	1981[1]	3,842	3,897	3,895	4,222
1975	4,499	4,755	4,434	4,140	1982[1]	3,460	3,384	3,744	3,563
1976	3,907	4,510	3,923	3,621	1983[1]	4,276	3,760	3,490	3,599

[1] Preliminary. *Source: Department of Commerce* T.755

Average Wholesale Price of Wheat Flour (Spring[1]), at Minneapolis In Dollars per Hundred Pounds (Bulk)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1970–1	6.13	6.13	6.28	6.41	6.41	6.36	6.35	6.31	6.25	6.24	6.23	6.20	6.28
1971–2	6.11	6.06	5.98	6.00	6.01	6.00	6.00	5.99	5.91	5.91	5.93	5.95	5.99
1972–3	6.025	6.525	6.888	6.850	6.938	7.625	7.613	7.138	7.263	7.325	7.313	7.875	7.11
1973–4	7.738	10.280	10.600	9.913	10.225	11.525	12.975	13.313	12.700	10.188	9.838	10.963	10.85
1974–5	12.013	11.513	11.425	12.600	12.938	12.175	11.488	11.025	10.388	10.363	9.863	9.550	11.28
1975–6	10.213	10.513	11.238	11.163	10.675	10.150	10.150	10.213	10.713	10.250	10.075	10.350	10.48
1976–7	10.288	9.438	8.500	8.375	7.913	7.838	7.750	7.863	7.725	7.125	6.925	6.500	8.015
1977–8	6.588	6.688	7.025	7.188	7.338	7.200	7.588	7.325	7.650	8.638	8.388	8.100	7.746
1978–9	8.250	7.938	7.825	7.900	8.400	8.138	7.813	8.038	8.313	8.300	9.013	9.288	8.268
1979–0	10.638	10.513	10.463	10.563	10.713	10.438	10.088	10.413	10.113	9.688	10.375	10.338	10.362
1980–1	11.025	10.963	10.975	11.113	11.138	—	11.050	11.113	10.975	11.100	11.075	11.125	11.059
1981–2	10.813	10.750	10.588	10.525	10.675	10.338	10.763	10.950	10.738	10.538	10.550	10.500	10.644
1982–3	10.538	10.188	10.475	10.388	10.463	10.450	10.163	10.300	10.753	10.813	10.950	11.213	10.558

[1] Standard patent. *Source: Bureau of Labor Statistics* (0212–0103) T.758

Wheat and Flour—Price Relationships at Milling Centers (In Dollars)

	At Kansas City					At Minneapolis				
		Wholesale Price of					Wholesale Price of			
				Total Products					Total Products	
Crop Year (June-May)	Cost of Wheat to Produce 100 lb. Flour[1]	Bakery Flour Per 100 lb.[2]	By-Products Obtained 100 lb. Flour[3]	Actual	Over Cost of Wheat	Cost of Wheat to Produce 100 lb. Flour[1]	Bakery Flour Per 100 lb.[2]	By-Products Obtained 100 lb. Flour[3]	Actual	Over Cost of Wheat
1973–4	10.58	10.36	1.60	11.96	1.38	10.48	10.67	1.56	12.23	1.75
1974–5	10.43	10.07	1.61	11.68	1.25	11.04	11.28	1.58	12.86	1.82
1975–6	9.43	9.23	1.56	10.79	1.36	10.04	10.39	1.51	11.90	1.86
1976–7	7.06	7.02	1.66	8.68	1.62	7.46	8.12	1.70	9.82	2.36
1977–8	6.56	6.76	1.26	8.02	1.46	6.73	7.49	1.20	8.69	1.96
1978–9	7.85	7.89	1.47	9.36	1.51	7.76	8.22	1.34	9.56	1.80
1979–0	9.85	10.02	1.70	11.72	1.87	9.73	10.26	1.51	11.77	2.04
1980–1	10.30	10.38	1.99	12.37	2.07	10.95	11.00	1.78	12.78	1.83
1981–2	9.81	10.37	1.57	11.94	2.13	9.80	10.67	1.41	12.08	2.28
1982–3[4]	9.46	10.22	1.52	11.74	2.28	9.45	10.54	1.26	11.80	2.35
June–Sept. '82	9.24	10.14	1.39	11.53	2.29	9.31	10.43	1.25	11.68	2.37
Oct.–Dec. '82	9.22	10.06	1.58	11.64	2.42	9.22	10.43	1.29	11.72	2.50
Jan.–Mar. '83	9.60	10.40	1.47	11.87	2.27	9.15	10.41	1.10	11.51	2.36
Apr.–May '83	9.77	10.26	1.65	11.91	2.14	10.11	10.88	1.40	12.28	2.17
1983–4[4]										
June–Sept. '83	9.54	10.36	1.72	12.08	2.54	9.97	11.17	1.47	12.64	2.67
Oct.–Dec. '83	9.48	10.00	2.16	12.16	2.68	9.76	10.79	1.90	12.69	2.93
Jan.–Mar. '84										

[1] Cost of 2.28 bushels. [2] Quoted as 95% patent at K.C. & standard patent at Minn., bulk basis. [3] Assumes 50–50 millfeed distribution between bran & shorts or middlings, bulk basis. [4] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.751

Volume of Trading in Wheat Futures at Chicago Board of Trade In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec	Jan.	Feb.	Mar.	Apr.	May	June	Total
1971–2	421.1	371.0	328.9	330.4	322.3	338.7	273.3	244.2	233.0	242.1	197.2	233.1	3,535
1972–3	516.77	1,065	981.7	809.6	774.7	835.4	767.3	810.6	782.5	725.5	927.6	765.1	9,764
1973–4[1]	898.0	758.8	1,018	1,087	1,131	1,130	1,153[1]	970.6	1,137	922.4	864.0	1,026	12,096
1974–5	1,285	1,049	307	1,154	810	653	902	731	768	637	682	858	10,436
1975–6	1,520	1,313	1,062	1,159	960	721	848	1,399	1,472	1,288	1,121	1,758	14,621
1976–7	1,796	1,228	1,876	1,180	1,005	601	577	810	888	693	597	846	12,097
1977–8	824	62	777	740	982	747	694	713	1,130	1,179	1,063	1,122	10,594
1978–9	1,133	1,312	1,034	1,260	1,272	878	889	843	805	660	1,092	1,878	13,056
1979–0	1,932	1,806	1,642	2,714	1,858	1,551	2,064	2,216	1,897	2,091	2,054	2,011	23,836
1980–1	3,336	1,949	2,551	2,720	2,190	2,060	1,855	1,509	1,735	1,334	1,412	2,130	24,781
1981–2	2,368	2,055	1,833	1,821	2,340	2,122	1,600	1,621	1,780	1,683	1,517	1,815	22,555
1982–3	2,103	1,988	1,758	1,338	1,848	1,108	1,406	1,586	1,838	1,374	1,161	1,646	19,164
1983–4	2,113	2,653	1,842	1,194	1,552	1,069	1,368	1,194	1,481	1,223			

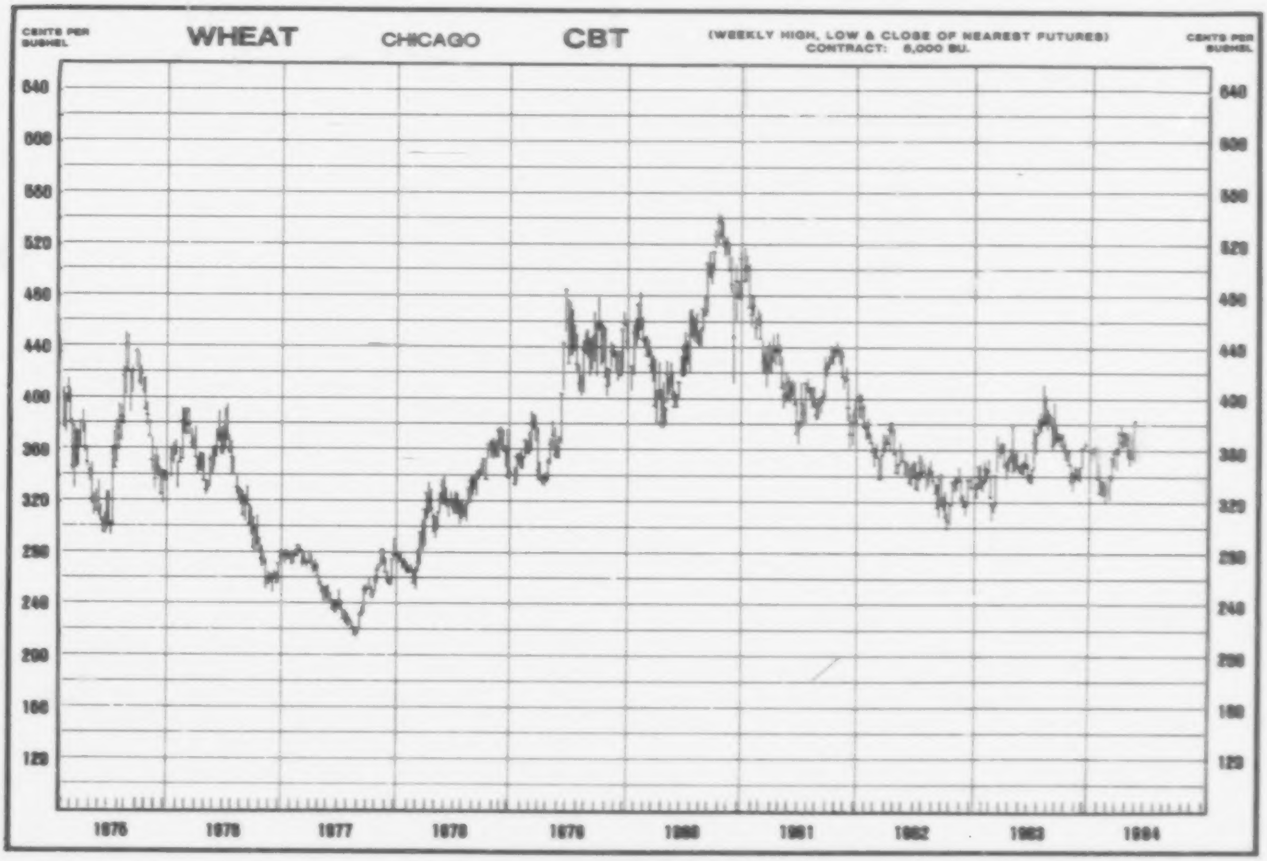
[1] Data prior to Jan. 1973 are for ALL "CONTRACT" MARKETS IN THE U.S. *Source: Chicago Board of Trade* T.749

WHEAT AND FLOUR

High, Low & Closing Prices of May Wheat Futures on the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery									Delivery Year					Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	
1978	High	316	295	282½	274¼	252½	270¾	277½	297	293	287¾	276	314¼	335	326	335
	Low	294½	271½	263¼	245¼	238¾	241½	258	272½	267	272	259¼	261¼	296	291½	238¾
	Close	294½	275½	274¼	248¾	242¼	267¾	274	280	284¾	272¾	260¾	313½	309	325¾	—
1979	High	349	351	341½	337	327¼	335¼	355½	356	356	340	355½	361	354½	382½	382½
	Low	316	310½	316	308¼	297½	320	329¼	334½	328¾	323	328	335½	332	352½	297½
	Close	322	342½	320¼	314¾	323	332¾	351¼	354¾	333½	331¼	353¼	339¾	353¾	358¾	—
1980	High	371	398	514	486	475	481	500	469½	474¾	474	491	458½	429	428½	514
	Low	344½	366½	390	406½	411	430½	436	433	443	415¾	447	383	376½	383	344½
	Close	368½	390¾	451	415	464½	474¼	450¾	462¼	462¼	473½	447¼	383½	385½	414	—
1981	High	477	490	482½	503½	506	541½	570½	563½	553½	526	487	451	451	439½	570½
	Low	440½	451	444	462½	482½	502	517	541¼	455½	465	455	418½	426	393	393
	Close	450	453½	470	500¾	502¼	531	554¼	553¼	510¼	471¼	457½	433¾	433¾	398	—
1982	High	526	510	489	491	484½	465	476½	478½	453½	412	400½	375½	382½	360	526
	Low	500	479	447	455	446½	447	455	444½	384	382	360½	345	357	342	342
	Close	506	487	454	476	449½	458	474¼	447¾	400¾	391¾	366¾	370¼	357	354	—
1983	High	444¼	434½	411	403½	399	390½	354¼	368¼	355	356¾	363½	370½	366¼	360½	444¼
	Low	423	406¼	388½	381	374	343¼	327¼	338½	333¼	330½	318½	322¼	338¼	341¾	318½
	Close	431	406¼	395	392	383¼	349½	337¾	353¾	338½	351½	321½	360¼	351¼	346¾	—
1984	High	415	403	388	401¼	441	432	392½	376	365½	359	333¾	375	380		
	Low	396	380¼	375¾	372½	397	386	364¾	347½	347	329¾	324½	330	349½		
	Close	399	380¼	379½	398	431¼	390½	369½	355	360½	334	331¼	374	350¾		
1985	High	383½														
	Low	372														
	Close	372														

Source: Chicago Board of Trade T.750



Open Interest of All Wheat Futures Contracts at Chicago,[1] K.C. & Mpls. In Millions of Bushels

Year	End of Month[1] Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Kansas City[3] Jan. 1	July 1	Minn.[2] Jan. 1
1976	165.8	206.7	202.9	171.2	183.5	226.4	237.2	227.2	233.8	270.2	260.5	229.4	102.5	120.6	27.4
1977	220.0	238.0	203.0	196.6	183.0	200.1	207.6	208.1	240.9	248.2	236.9	245.1	107.4	81.6	27.4
1978	229.4	200.7	180.6	164.9	193.2	163.1	190.0	240.9	255.9	241.7	240.4	186.4	102.7	84.8	25.9
1979	195.0	195.1	173.5	187.2	176.0	250.2	258.6	302.6	319.7	284.1	287.5	286.9	84.7	120.1	35.3
1980	279.5	266.6	222.5	214.2	213.5	270.0	345.4	345.7	376.3	442.9	420.1	350.5	121.0	92.0	31.5
1981	291.1	236.5	211.7	209.8	243.0	283.1	324.4	329.5	337.3	384.7	368.7	312.9	142.6	80.7	28.7
1982	335.9	274.7	244.5	234.9	253.2	235.5	277.6	254.8	238.9	218.7	186.8	182.3	137.0	97.7	28.7
1983	193.9	155.5	194.9	172.2	191.7	223.0	294.0	348.1	329.7	300.3	282.3	304.3	118.5	106.0	21.3
1984	291.5	281.3	288.9	248.4									89.0		23.7

[1] Chicago Board of Trade. [2] Minneapolis Grain Exchange. [3] Kansas City Board of Trade. *Source: Commodity Futures Trading Commission*

T.748

World Wheat Flour Production In Thousands of Metric Tons

Year	Argentina	Australia[2]	Canada	Spain	India[3]	Mexico	Israel	Japan	W. Germany	Egypt	Poland	South Africa	United Kingdom	United States	Yugoslavia
1976	2,532	1,236	1,933	2,952	1,666	1,716	444	4,008	3,252	2,880	2,462	950	3,960	11,772	2,424
1977	2,616	1,176	1,872	2,976	2,136	1,680	468	3,960	3,264	3,240	2,262	917	3,900	11,856	2,388
1978	2,592	1,092	1,951	2,504	2,227	1,752	492	4,044	3,336	3,480	2,324	940	3,852	12,612	2,388
1979	2,556	1,080	1,978	2,600	1,636	1,920	480	4,176	3,456	3,492	2,440	901	3,780	12,876	2,400
1980	2,494	1,084	1,930	2,429	2,568	2,158	455	4,152	3,652	3,188	2,522	890	3,696	12,822	2,404
1981	2,545	1,134	1,900	N.A.	2,328	2,286	463	4,201	3,612	3,512	2,620	718	3,588	11,824	2,330
1982[1]	2,644	1,127	1,750	N.A.	2,642	2,356	498	4,303	3,504	3,550	N.A.	726	3,588	12,925	2,408
1983[4]	2,700	1,088	1,600		2,800	2,200	500	4,348	3,400	3,700		700	3,600	13,200	2,700

[1] Preliminary. [2] Twelve months ending June 30 of the year stated. [3] Represents 60 percent of the total production. [4] Estimate. *Source: United Nations*

T.752

Supply and Distribution of Wheat Flour in the United States In Thousands of Cwt.

Year	Wheat Ground 1,000 Bu.	Millfeed Production 1,000 Tons	Flour Production[1] (1,000 Cwt.)	Flour and Product Imports[2] (1,000 Cwt.)	Total Supply (1,000 Cwt.)	Exports Flour (1,000 Cwt.)	Exports Products[2] (1,000 Cwt.)	Domestic Disappearance (1,000 Cwt.)	Total Population July 1 Millions	Per Capita Disappearance Pounds
1976	618,284	4,920	275,077	604	275,681	16,064	44	259,573	218.0	119
1977	618,125	4,787	275,784	604	276,388	22,053	37	254,298	220.2	115
1978	621,321	4,860	277,950	773	278,723	22,170	43	256,510	222.6	115
1979	636,375	4,945	284,051	823	284,874	20,927	86	263,861	225.1	117
1980	628,499	4,867	282,655	904	283,559	17,378	54	266,127	227.7	117
1981	634,381	5,044	283,966	1,159	285,125	18,655	84	266,386	229.8	116
1982[3]	640,158	5,136	284,965	1,501	296,466	21,784	154	264,528	232.1	114

[1] Commercial production of wheat flour, whole wheat, industrial and durum flour and farina reported by Bureau of Census. Production prior to 1970 includes estimate for non-commercial wheat milled. [2] Imports and exports of macaroni products (flour equivalent). [3] Preliminary. *Source: Economics & Statistics Service, U.S.D.A.*

T.753

Volume of Trading in Wheat Futures at Chicago Board of Trade In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1970–1	458.3	534.0	491.1	377.4	343.0	293.3	230.2	247.6	230.7	338.2	267.1	424.1	4,235
1971–2	421.1	371.0	328.9	330.4	322.3	338.7	273.3	244.2	233.0	242.1	197.2	233.1	3,535
1972–3	516.77	1,065	981.7	809.6	774.7	835.4	767.3	810.6	782.5	725.5	927.6	765.1	9,764
1973–4[1]	898.0	758.8	1,018	1,087	1,131	1,130	1,153[1]	970.6	1,137	922.4	864.0	1,026	12,096
1974–5	1,285	1,049	907	1,154	810	653	902	731	768	637	682	858	10,436
1975–6	1,520	1,313	1,062	1,159	960	721	848	1,399	1,472	1,288	1,121	1,758	14,621
1976–7	1,796	1,228	1,876	1,180	1,005	601	577	810	888	693	597	846	12,097
1977–8	824	62	777	740	982	747	694	713	1,130	1,179	1,063	1,122	10,594
1978–9	1,133	1,312	1,034	1,260	1,272	878	889	843	805	660	1,092	1,878	13,056
1979–0	1,932	1,806	1,642	2,714	1,858	1,551	2,064	2,216	1,897	2,091	2,054	2,011	23,836
1980–1	3,336	1,949	2,551	2,720	2,190	2,060	1,855	1,509	1,735	1,334	1,412	2,130	24,781
1981–2	2,368	2,055	1,833	1,821	2,340	2,122	1,600	1,621	1,780	1,683	1,517	1,815	22,555
1982–3	2,103	1,988	1,758	1,338	1,848	1,108	1,406	1,586	1,838	1,374	1,161	1,646	19,164
1983–4	2,113	2,653	1,842	1,194	1,552	1,069	1,368	1,194	1,481	1,223			

[1] Data prior to Jan. 1973 are for ALL "CONTRACT" MARKETS IN THE U.S. *Source: Chicago Board of Trade*

T.749

WHEAT AND FLOUR

United States Wheat Flour Production In Millions of Sacks (100 Pounds Each)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1973–4	20.1	21.9	21.6	22.0	20.7	21.0	22.1	20.1	20.8	18.5	18.9	18.6	246.3
1974–5	18.7	20.3	20.8	22.8	20.9	19.7	19.5	17.7	19.1	20.6	20.4	19.6	240.1
1975–6	21.2	21.7	22.7	24.1	20.1	20.5	22.3	21.1	23.1	22.4	22.1	22.3	263.6
1976–7	23.1	25.7	24.6	24.1	22.3	22.1	22.6	22.7	25.8	21.9	22.1	21.8	278.8
1977–8	20.6	24.4	23.4	23.4	23.8	23.4	21.8	21.8	24.3	22.6	24.1	23.1	276.7
1978–9	22.3	25.1	22.5	24.8	23.7	21.9	22.8	21.5	23.5	22.3	24.6	22.5	277.5
1979–0[1]	23.5	26.3	23.3	26.1	24.8	22.7	24.6	22.6	22.2	21.2	22.8	21.4	281.5
1980–1[1]	23.1	24.0	24.8	26.3	24.4	25.2	25.9	22.8	25.0	24.0	23.4	23.5	292.4
1981–2[1]	23.3	23.7	24.2	24.7	22.8	22.3	24.0	23.6	25.3	22.5	21.9	22.5	280.8
1982–3[1]	23.2	24.7	24.2	25.0	23.9	24.5	24.4	23.4	26.8	24.1	25.8	25.1	295.1
1983–4[1]	24.7	28.9	27.4	26.1									

[1] Preliminary. *Source: Bureau of the Census*

T.754

United States Official Winter Wheat Crop Production Reports In Thousands of Bushels

Crop Year	Previous December	May 1	June 1	July 1	August 1	Sept. 1	Current December	Final
1973–4	1,277,848	1,281,999	1,315,672	1,319,702	1,293,053	1,291,463	1,269,653	1,278,220
1974–5	1,513,462	1,612,106	1,531,355	1,402,445	1,393,460	1,390,800	1,391,303	1,375,526
1975–6	1,599,527	1,619,776	1,618,598	1,636,524	1,634,227	1,650,037	1,651,209	1,642,900
1976–7	1,495,869	1,458,996	1,416,000	1,530,124	1,542,660	1,542,330	1,566,074	1,564,118
1977–8	1,438,015	1,477,455	1,526,000	1,539,029	1,526,029	1,528,844	1,526,713	1,540,419
1978–9	1,321,068	1,284,375	1,308,000	1,801,705	1,248,405	1,243,685	1,248,272	1,222,446
1979–0	1,441,306	1,390,848	1,427,000	1,560,768	1,602,901	1,595,591	1,608,897	1,601,234
1980–1	1,567,817	1,711,010	1,757,170	1,848,000	1,870,000	1,878,000	1,891,251	1,895,383
1981–2	1,977,079	2,078,137	2,013,607	2,092,692	2,064,845	2,059,205	2,098,719	2,103,538
1982–3	2,128,133	2,063,336	2,131,214	2,124,854	2,095,554	2,106,149	2,108,246	2,111,806
1983–4	Discontinued	1,893,241	1,882,916	1,937,388	1,963,243	1,976,843	1,993,888	
1984–5		1,979,366						

Source: Crop Reporting Board, U.S.D.A.

T.736

United States Wheat Flour Exports In Thousands of 100 Pound Sacks

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1973–4	1,352	1,596	1,607	483	612	912	914	1,015	904	832	957	858	12,042
1974–5	784	797	699	816	929	1,058	820	715	577	516	1,718	1,119	10,548
1975–6	1,084	999	753	735	588	555	423	379	525	1,149	1,789	2,184	11,163
1976–7	1,294	2,083	2,449	997	447	188	1,218	2,334	2,519	3,272	1,857	1,248	12,483
1977–8	1,794	1,146	735	473	766	1,237	723	1,539	1,774	2,554	2,297	2,694	17,127
1978–9[1]	1,674	2,145	1,962	1,505	357	486	382	1,165	1,163	752	2,689	1,727	16,008
1979–0[1]	1,669	2,489	2,218	1,223	842	1,971	1,018	1,300	2,713	867	918	1,606	18,833
1980–1[1]	894	2,137	1,396	1,034	522	609	980	1,896	2,241	2,932	1,724	2,350	18,715
1981–2[1]	987	1,420	724	284	117	184	605	2,165	2,336	2,858	1,760	944	14,384
1982–3[1]	352	1,196	698	593	824	185	1,587	3,734	2,692	4,256	3,193	4,172	23,482
1983–4[1]	3,293	3,095	3,621	3,469	1,122	395							

[1] Preliminary. *Source: Department of Commerce*

T.756

Wool

In 1983, the U.S. wool textile business completed its best year of the past decade. Mill consumption of raw wool in the last quarter of 1983 totaled 37 million pounds, clean, which was the largest fourth-quarter consumption since 1972. Apparel wool use was 34.5 million pounds, 41 percent over a year earlier. Raw wool use in carpets was 2.5 million pounds, 16 percent over a year earlier. For all of 1983, U.S. raw wool use was 144 million pounds, clean, the most raw wool used in any year since 1973 when 151.3 million pounds were consumed. The woolen system used 66.5 million pounds, the largest quantity since 1969. Strong consumer demand was reported for apparel made by woolen mills, including women's coating and heavy skirts. The worsted system used 65.7 million pounds, which was exceeded only by 68.2 million in 1983. Raw wool use in carpets was 11.9 million pounds in 1983, 10 percent more than the average of the past 5 years and the most since 1979, when 13 million pounds were used.

Imports of wool in 1983 totaled 78.1 million pounds. Duty-free imports totaled 28.7 million pounds. Nearly 95 percent of the wool imported into the U.S. came from three countries: New Zealand (76 percent), the United Kingdom (12 percent), and Argentina (7 percent). Dutiable imports were 49.4 million pounds, of which 92 percent came from Australia (71 percent), South Africa (17 percent), and New Zealand (5 percent). The raw wool content of imported textile products in 1983 was 149.8 million pounds.

For all of 1983, U.S. exports of wool amounted to 1 million pounds, 25 percent less than the previous year, partly due to the adverse influence of the unusually strong dollar. Almost all of these exports were shipped to: the United Kingdom (41 percent), France (38 percent), and Canada (19 percent). The raw wool content of the U.S.'s exported textile products during 1983 was 20.8 million pounds.

Wool prices increased steadily from the beginning of the season in September through the fourth quarter of 1983 and into January 1984. Territory medium-grade prices advanced 10 to 13 percent, while, in contrast, the finer grades went up 2 to 3 percent. Most of the upward pressure on medium-grade prices came from relatively larger consumption, especially in the woolen system. At the same time, somewhat depressed world demand kept the prices of fine grades from rising too much.

On a worldwide basis, the weak demand for Australian wool that began the season continued through December 1983. Australia's market indicator (a weighted-average index of 13 wool categories) declined from a high of 482 to 476 during the last quarter of the year. In addition to subdued textile activity overseas, another factor dampening wool sales was a strengthening of the Australian dollar. To maintain the market, the Australian Wool Corporation (AWC) purchased 35 percent of the offering during the last two months of 1983. However, at the end of the year, the AWC stockpile was 1.32 million bales, 52 percent more than at the beginning of the season.

In the first month after its Christmas recess, the Australian wool market experienced strong demand, aided this time by a slight weakening in the Australian dollar. The market indicator rose 3 percent to 490, and price rises were recorded for both the merino and crossbred wool types. This stronger demand caused a 5 percent decline in the AWC stockpile. The most active buyers were East Europe and Japan. Estimates by the Australian Wool Production Forecasting Committee put wool production for 1983/84 at 1.51 billion pounds, less than 3 percent below the previous season's output. Since the end of the drought in the wool-growing areas, there were signs of movements into wool production relative to cattle and lambs. Thus, flock retention rates were expected to be higher, and lower slaughtering rates were anticipated. As a result, a considerable expansion in sheep numbers was projected for 1984/85.

The New Zealand wool market saw moderate wool demand in the first half of the season. The market indicator ranged from a high of 307 in late September to a low of 282 in December. The principal buyers of New Zealand wool were Europe (both Western and Eastern) and China. Early in 1984, New Zealand wool prices rose in response to stronger demand, and the market indicator rose to 314.

The demand for South African wool in the first half of the season was quite strong. The market indicator rose 11 percent, reaching 575 at the year's end. This demand resulted from the rand's favorable exchange ratio with the currencies of most wool-importing countries. At the same time, an appreciation of the Australian dollar tended to reduce the competitiveness of Australian wool somewhat. Demand rose for all types of South African wool: 60's to 62's rose 15 percent, and 64's to 70's rose by 11 percent. A few record prices were realized for superfine grades. The principal buyers of wool from South Africa during 1983 were Western Europe, Japan, and the U.S. The demand for South African wool continued to be strong at the beginning of 1984, with the market indicator rising more than 9 percent to a record 629.

Projections for the U.S. wool industry in 1984 were expected to depend upon the strength of the economic recovery. By the second quarter of 1984, prices for wool had reached higher levels than many trade sources had expected. The domestic clip was reportedly being sold steadily, inventories were being drawn down, and many mills were operating at full and nearly full capacity. Some mills evidently had ordered wool for delivery through the end of the year. As of January 1984, the average U.S. farm price was 63.7 cents per pound. Spring 1984 prices for wool were expected to be 5 to 10 cents above prices during the comparable period in 1983. By late second-quarter 1984, wool prices were expected to reach the mid-70's. Higher prices for wool were attributed partially to a reduction in the inventory of U.S. sheep and lambs and a cutback in the number of U.S. sheep operations because of falling profits from 1980 to 1982.

Futures Markets

Greasy merino wool futures are traded on the Sydney Futures Exchange, and New Zealand crossbred wool futures are traded in London.

WOOL

World Production of Wool[3] In Thousands of Metric Tons (Greasy Basis)

Year	Brazil	Argentina	Australia	China	France	Morocco	India	N. Zealand	Spain	Turkey	South Africa	Un. Kingdom	United States	Uruguay	USSR	World[1] Total
1971	34.4	188.8	880.4	88.6	21.0	13.5	37.0	322.3	32.1	47.5	121.2	44.5	81.9	62.0	428.8	2,606
1972	37.1	177.0	735.2	90.3	21.2	20.0	30.8	308.8	31.7	50.3	114.7	46.7	79.6	61.0	420.0	2,413
1973	36.5	179.2	700.9		21.4	23.0	30.1	284.8	31.8	47.3	113.3	49.4	72.0	53.0	433.0	2,355
1974	34.4	183.4	793.5		21.7	19.0	30.5	294.1	34.0	52.4	114.6	49.9	64.7	55.0	461.0	2,495
1975	31.3	190.2	757.4		21.9	20.0	31.0	311.8	29.0	53.0	114.3	50.3	58.6	60.0	463.0	2,481
1976	30.3	176.3	702.7	61.0	22.0	21.0	32.0	302.5	28.6	53.9	110.5	49.9	53.8	60.4	432.0	2,457
1977	26.9	172.0	677.4	61.0	22.4	20.0	33.1	310.8	28.0	54.1	113.4	48.0	49.9	62.2	455.0	2,465
1978	28.0	170.8	709.2	61.0	22.6	12.0	34.2	310.8	29.0	56.7	113.4	49.2	46.2	65.8	460.0	2,433
1979	31	166	709	153	26	21	35	357	29	59	110	48	48	72	412	2,553
1980[2]	35	163	700	176	27	22	35	381	28	61	112	50	49	79	464	2,641
1981[1]	33	163	716	180	27	22	35	363	21	62	112	42	50	79	482	2,653
1982			701					370							471	
1983[2]			672					370							474	
1984																

[1] Estimated. [2] Preliminary. [3] Includes shorn, pulled, & wool exported on skins. *Source: Foreign Agricultural Service, U.S.D.A.* T.760

World Consumption of Wool In Millions of Pounds (Clean Basis)

Year	Argentina	Australia	Belgium	Canada	France	W. Germany	Italy	Japan	Netherlands	New Zealand	South Africa	United Kingdom	United States[3]	Uruguay	Soviet Bloc	World Total
1971	74	77	67	10	318	163	195	402	19	28	26	311	191	45		3,263
1972	80	75	68		322	170	227	400	19			336	219			3,480
1973	67	62	51		259	119	202	411	14			301	151		1,037	3,180
1974	71	47	45		231	85	189	258	12			248	93		1,102	2,861
1975	70	48	54		236	120	196	294	12			244	110		1,099	3,032
1976[1]	71	61	70		276	145	262	346	14			264	122		1,070	3,293
1977[2]	81	57	68		259	134	251	291				250	108		1,116	3,176
1978[2]													115			
1979[2]													117			
1980[2]													123			
1981[2]													139			
1982[2]													116			
1983																

[1] Preliminary. [2] Estimate. [3] Consumption on woolen & worsted systems only. *Sources: Bureau of the Census; Commonwealth Economic Committee* T.761

Wool: Mill Consumption, by Grades in the U.S. Scoured Basis In Millions of Pounds

	Apparel Wool[1]							
	Woolen System			Worsted System				
Year	60's & Finer	50's Up to 60's	Total[4]	60's & Finer	Coarser Than 60's	Total	All Total	Carpet Wool[2]
1971	14.8	21.7	40.4	37.7	38.1	75.8	116.2	75.2
1972	19.9	26.7	50.2	54.6	37.4	92.0	142.2	76.4
1973	13.6	24.7	41.7	40.2	28.0	68.2	109.9	41.4
1974	10.9	18.9	33.0	23.8	18.0	41.8	74.9	18.6
1975	15.7	25.3	41.0	34.1	19.0	53.1	94.1	15.9
1976	20.6	29.2	49.8	34.9	21.9	56.8	106.6	15.1
1977	22.3	26.3	48.6	27.6	19.3	46.9	95.5	12.5
1978	24.4	28.6	53.0	32.7	16.5	49.2	102.3	13.0
1979	29.0	28.3	57.4	27.2	21.9	49.2	106.5	10.5
1980	28.2	28.8	57.0	35.5	20.9	56.4	113.4	10.0
1981	35.2	29.3	64.5	41.2	22.0	63.3	127.8	10.9
1982[3]	24.2	23.9	48.1	35.6	21.3	56.9	105.9	9.8
1983[3]							132.2	11.9

[1] Domestic & Duty-Paid Foreign. [2] Duty-Free Foreign. [3] Preliminary. [4] Includes 48's & coarser prior to 1975. *Source: Economic Research Service, U.S.D.A.* T.762

Wool Goods[1] Production in the United States In Millions of Square Yards

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year	Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
1970	58.1	54.2	35.4	30.9	178.6	1977	26.2	26.7	23.3	25.4	101.6
1971	37.0	32.6	22.7	21.1	113.3	1978	28.2	31.2	27.3	30.0	116.6
1972	25.3	27.7	22.2	26.6	101.8	1979	33.5	31.3	26.5	28.2	117.4
1973	28.4	29.6	23.7	19.3	101.1	1980	45.2	46.8	31.9	34.4	158.3
1974	23.6	22.7	17.6	17.1	81.0	1981	46.6	48.9	36.4	33.1	178.1
1975	17.3	19.4	20.4	21.7	78.9	1982	38.1	36.1	18.8	23.6	121.1
1976	26.0	26.4	22.9	21.9	97.3	1983[2]	34.2	40.0	28.2		

[1] Woolen and worsted woven goods, except woven felts. [2] Preliminary. *Source: Bureau of Census*

T.763

United States Imports[1] of Unmanufactured Wool (Clean Yield) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	12.0	9.4	11.2	11.1	11.5	10.4	13.8	17.0	13.3	5.3	1.0	10.7	126.6
1972	7.1	10.5	7.2	11.8	8.6	6.3	9.9	10.7	6.2	5.8	6.7	5.7	96.6
1973	7.7	7.2	5.7	5.6	6.4	6.8	5.4	4.7	2.5	2.8	2.0	1.9	57.9
1974	1.6	3.0	2.5	2.5	3.1	3.2	2.4	2.9	1.8	1.7	1.0	1.3	26.9
1975	2.2	1.4	1.7	2.1	2.2	2.9	2.4	2.4	2.9	4.9	4.0	4.4	33.6
1976	5.8	5.3	5.6	5.9	4.7	3.9	4.8	5.7	4.6	4.0	3.3	4.4	58.0
1977	5.2	5.0	4.7	5.1	7.4	7.4	4.0	4.7	2.4	2.2	1.8	3.0	53.0
1978	3.7	3.2	4.1	4.9	4.0	3.8	4.7	5.4	3.4	4.0	4.8	4.0	50.4
1979	4.5	3.4	4.2	3.9	4.3	3.1	4.1	3.3	2.6	2.0	3.5	3.5	42.3
1980	6.1	4.9	5.1	4.6	5.7	4.5	5.3	4.8	4.1	3.9	3.6	4.0	56.5
1981	6.9	7.7	6.6	7.5	8.6	4.9	6.5	5.3	3.7	6.0	5.1	5.3	75.3
1982	8.0	6.3	6.6	4.9	6.0	6.6	4.0	4.2	4.7	2.9	3.6	3.7	61.4
1983	6.0	6.3	5.0	6.7	4.9	7.5	6.5	5.8	5.1	8.5	8.0	8.9	79.2
1984													

[1] Data are imports for consumption. *Source: Department of Commerce*

T.764

Price Received by Farmers for Shorn[2] Wool in the U.S. In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1970	35.6	35.7	35.5	37.5	36.6	37.5	37.1	34.2	31.6	32.5	31.7	28.2	35.5
1971	25.3	24.6	23.3	22.9	21.2	21.3	18.7	17.9	18.9	17.0	17.9	16.8	19.4
1972	17.7	19.6	24.2	29.1	34.5	39.4	39.2	38.4	35.8	50.9	52.5	49.3	35.0
1973	78.0	77.3	90.4	86.1	82.3	84.5	83.0	78.8	83.7	74.3	70.1	70.6	82.7
1974	78.4	70.0	66.1	62.5	60.6	59.7	61.1	52.5	48.7	49.6	45.8	43.5	59.1
1975	40.9	33.7	36.7	43.6	48.0	46.7	48.0	46.2	44.8	52.8	47.4	43.3	44.7
1976	50.7	58.4	59.5	64.4	65.1	68.1	68.3	67.0	68.2	70.8	71.2	69.5	65.7
1977	72.9	72.5	72.4	72.5	71.9	73.7	72.3	70.4	66.4	71.3	70.6	69.3	72.0
1978	72.6	68.9	71.2	73.7	73.9	76.2	74.8	74.6	72.7	77.1	81.2	73.6	74.5
1979	78.7	77.3	79.5	86.9	88.0	89.4	87.7	81.8	84.9	87.5	89.0	86.5	86.3
1980	82.1	86.8	93.5	92.2	86.6	86.5	85.8	85.5	84.7	89.4	92.1	90.9	88.1
1981	84.6	88.3	91.8	101.0	99.8	101.0	94.4	84.8	84.3	87.3	91.1	84.2	94.5
1982	73.1	72.9	63.6	83.6	76.5	68.0	77.0	64.2	56.5	70.7	54.7	55.5	68.4
1983[3]	50.0	57.1	56.0	65.7	65.0	63.5	62.7	59.6	57.2	66.4	70.1	64.1	61.3
1984[3]	63.7	63.7	72.4	86.1									

[1] Weighted average. [2] Grease basis. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.765

WOOL

Salient Statistics of Wool in the United States

						Pulled Wool Production			Apparel Wool (Clean Content)					Mill Consumption	
Year	Sheep & Lambs Shorn[2] Ths.	Weight per Fleece Lbs.	Shorn Wool Production Ths. Lbs.	Price per Lb.	Value of Production Mil. $	Avg. Weight per Skin Lbs.	Total	Total Wool Production[4]	Domestic Prod.	Exports Domestic Wool	Imports for Consumption[4]	Total New Supply[3]	Carpet Wool Imports for Cons.	Apparel	Carpet
							Thousand Pounds								
1971	19,036	8.41	160,156	19.6	31.4	3.46	12,000	172,156	85,142	6,318	42,682	121,506	83,893	116,310	75,151
1972	18,770	8.44	158,506	35.0	55.5	3.40	9,700	168,206	90,762	11,224	24,790	104,328	71,849	142,233	76,368
1973	17,425	8.25	143,738	82.7	118.8	3.49	8,000	151,738	81,726	3,726	19,587	97,601	40,694	109,872	41,394
1974	15,956	8.23	131,382	59.2	77.8	3.31	5,700	137,082	73,525	4,271	11,800	81,053	15,147	74,856	18,595
1975	14,403	8.30	119,535	44.7	53.5	3.33	5,300	124,835	67,488	7,674	16,605	76,419	17,021	94,117	15,908
1976	13,669	8.11	110,817	65.7	73.1	3.32	4,000	114,817	62,197	1,130	38,387	99,454	19,076	106,629	15,117
1977	13,270	8.11	107,159	72.0	77.1	3.28	1,700	108,859	58,455	385	36,303	94,373	22,655	95,485	12,526
1978	12,609	8.08	101,874	74.5	75.9	3.16	1,000	102,874	55,082	425	27,000	81,657	23,404	102,246	13,009
1979	13,068	8.02	104,860	86.3	90.5	3.20	900	105,760	56,022	313	20,283	75,992	22,047	106,533	10,513
1980	13,255	7.95	105,367	88.1	92.8	3.08	1,050	106,417	56,398	304	30,491	86,585	25,992	113,423	10,020
1981	13,477	8.14	109,689	94.4	103.6	3.03	1,150	110,839	58,788	307	48,106	106,587	26,145	127,752	10,896
1982[1]	13,152	8.03	105,596	68.5	72.3			104,966	55,422	1,351	39,988	94,059	21,433	105,857	9,825
1983[1]	12,640	7.93	100,265	61.3	61.5				53,000	1,000	49,372	101,372	28,688	132,151	11,892
1984															

[1] Preliminary. [2] Includes sheep shorn at commercial feeding yards. [3] Production minus exports plus imports; stocks not taken into consideration. [4] Apparel wool includes all dutiable wool; carpet wool includes all duty-free wool. *Sources: Economics Service, U S.D.A.; Dept. of Commerce*

T.766

Consumption of Apparel Wool in the United States In Millions of Pounds (Clean Basis)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	10.2	9.5	13.0	9.4	9.7	12.1	7.3	8.0	10.7	8.8	7.7	9.8	116.2
1972	9.5	10.4	14.6	11.8	12.6	15.5	9.0	12.6	13.6	10.9	12.5	9.2	142.2
1973	12.6	9.9	9.6	10.9	9.8	9.4	8.5	8.4	7.7	10.0	6.8	6.2	109.9
1974	7.8	6.3	6.4	7.2	6.6	6.5	5.5	6.1	5.6	6.9	5.5	4.6	74.9
1975	6.5	5.8	6.5	8.4	7.8	7.6	8.1	8.1	8.1	10.3	7.8	9.3	94.1
1976	8.9	8.7	12.0	9.1	8.8	11.1	7.3	7.6	9.3	7.9	6.9	9.0	106.7
1977	8.2	8.3	10.0	7.9	7.7	9.5	5.2	7.4	8.6	7.7	7.0	7.9	95.5
1978	7.7	8.2	10.5	8.8	9.2	10.3	7.0	8.4	9.4	8.1	8.1	7.5	102.2
1979	10.5	8.6	9.2	10.4	8.8	8.1	7.8	7.8	7.1	10.1	9.9	8.2	106.5
1980	11.3	10.2	9.8	11.4	9.2	8.3	7.5	8.4	7.7	10.8	8.8	10.0	113.4
1981	10.2	11.0	12.9	10.8	10.2	12.8	8.4	10.1	11.4	9.4	9.4	11.2	127.8
1982	9.4	9.6	12.8	9.1	8.2	9.4	5.9	8.0	8.3	7.1	7.7	9.4	105.0
1983[1]	8.8	9.6	12.8	10.6	9.9	13.7	8.7	10.5	12.8	10.7			
1984													

[1] Preliminary. *Source: Bureau of the Census*

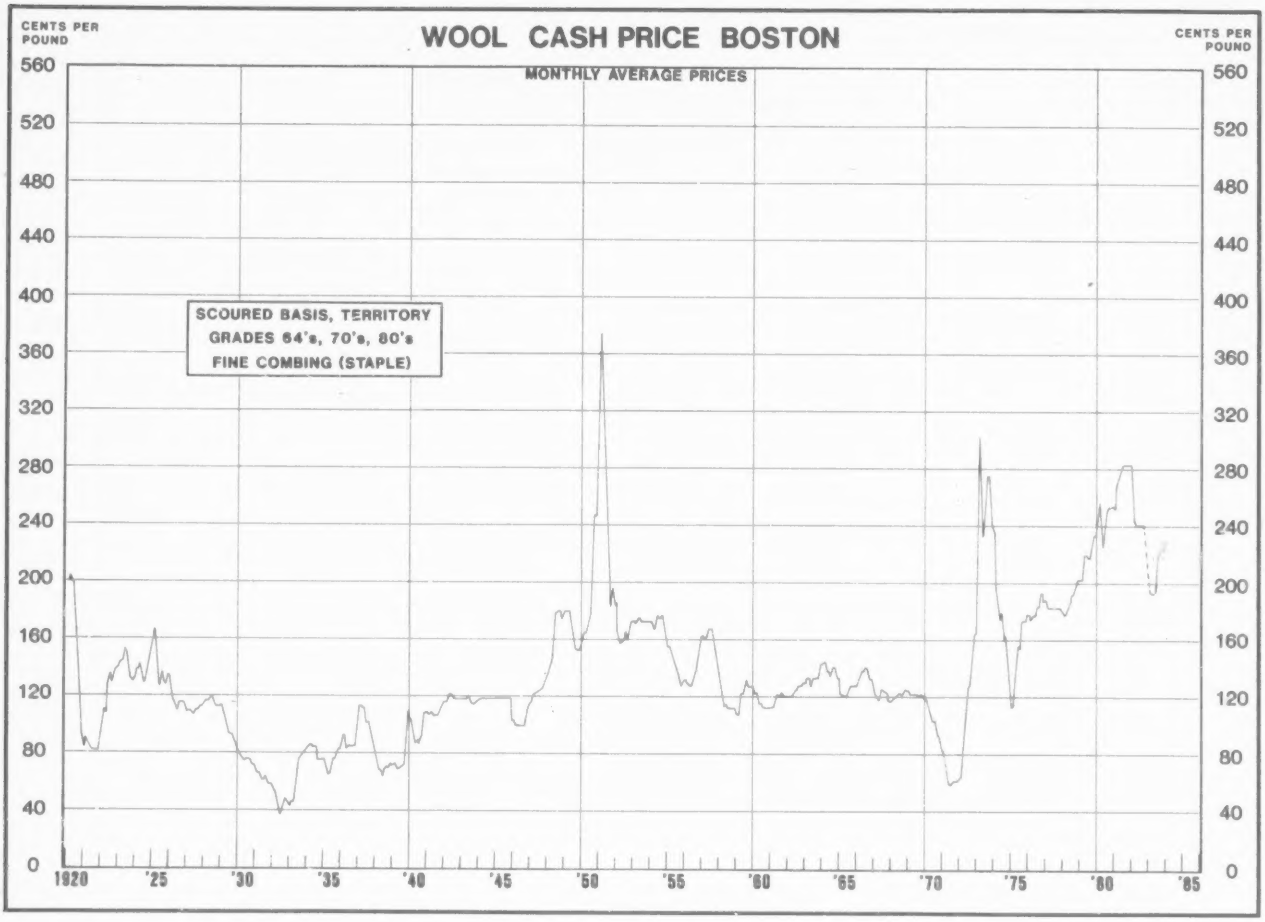
T.767

Average Wool Prices[1]—Australian—64's, Type 62, Duty Paid—U.S. Mills In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	199.0	204.0	209.0	211.2	219.6	209.0	206.8	204.3	198.5	197.3	206.0	205.0	205.8
1976	205.5	206.0	—	—	212.4	213.5	213.5	216.5	224.2	232.5	224.0	227.3	217.5
1977	229.0	227.3	227.6	228.3	228.0	226.3	227.0	224.0	227.0	227.0	230.5	226.5	227.4
1978	228	230	231	232	233	236	236	236	236	236	236	236	234
1979	237	249	265	273	278	282	283	283	293	309	290	280	277
1980	292	310	306	299	310	321	311	306	311	306	320	321	309
1981	319	312	307	314	316	319	323	320	316	316	317	312	316
1982	301	303	313	323	336	321	304	294	287	276	269	267	299
1983	273	271	266	266	262	262	260	262	263	271	270	266	266
1984	266												

[1] Raw, clean basis. *Source: U.S. Dept. of Agriculture*

T.768



Average Wool Prices—Domestic[1]—Graded Territory, 64's, Staple 2¾'' & Up—U.S. Mills ¢/Lb.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	82.5	82.5	75.7	70.8	63.0	59.7	59.0	59.5	61.0	61.0	60.5	61.5	66.4
1972	62.5	64.0	70.8	94.4	113.0	120.0	127.0	127.5	135.0	145.5	163.5	165.0	115.7
1973	188.0	232.5	302.5	233.8	233.5	257.5	260.0	275.0	275.0	263.0	241.9	237.5	250.0
1974	236.0	222.5	197.5	185.0	174.0	178.8	166.5	161.2	162.5	156.5	141.2	130.8	176.0
1975	116.2	112.5	113.8	134.0	150.6	155.6	153.8	171.2	172.5	172.5	172.5	177.5	150.2
1976	177.5	177.5	173.5	176.2	177.5	177.5	182.5	182.5	187.5	192.5	192.5	187.5	182.1
1977	187.5	187.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.0	183.3
1978	182	178	178	181	184	192	192	192	195	197	202	202	190
1979	202	202	206	220	220	218	218	218	220	230	233	233	218
1980	238	253	256	231	225	233	245	251	253	253	253	253	245
1981	253	268	274	278	278	283	283	283	283	283	283	283	278
1982	275	263	244	240	240	240	240	240	240	—	—	—	247
1983	—	—	193	193	193	198	219	223	225	225	225	228	212
1984	230												

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[1] Raw, shorn, clean basis. *Source: U.S. Dept. of Agriculture*

T.769

Zinc

World mine production of zinc in 1983 was more than 2 percent larger than in 1982, according to preliminary data of the U.S. Bureau of Mines. U.S. zinc mine production of recoverable zinc, however, was 9 percent below 1982 output—and was the second lowest annual production since 1932. Several mine closures and strikes contributed to reduced production in 1983.

Domestic smelter production of slab zinc declined 13 percent in 1983 in the face of increasing demand, due to the closure of a primary zinc plant in Texas. Four primary and 13 secondary smelters produced slab zinc in 1983.

In order to meet demand, U.S. imports of zinc metal increased sharply in 1983. The U.S. relies on net imports for about 66 percent of apparent domestic consumption. In 1983, imports of slab zinc increased 37 percent, to some 613 thousand metric tons, and imports of ores and concentrates (dutiable zinc content) increased 26 percent, to about 62 thousand tonnes. Import sources of ore and concentrates in the 1979–82 period were: Canada—56 percent; Peru—18 percent; Mexico—10 percent; others—16 percent. Import sources of metal in the same period were: Canada—54 percent; Spain—6 percent; Australia—6 percent; Peru—5 percent; others—29 percent.

Exports of slab zinc from the U.S. were less than 500 tonnes in 1983, the zinc content of waste and scrap increased 23 percent, but zinc ore and concentrate (zinc content) exports dropped 22 percent, to some 60,000 tonnes.

Europe is traditionally the largest zinc-consuming area, followed closely by North America and Asia. The U.S. has historically been the largest single consumer of zinc. Total U.S. consumption of zinc in 1983 was 7 percent larger than a year earlier, at 1.02 million tonnes. Slab zinc consumption increased 9 percent, to more than 775 thousand tonnes; consumption of ores increased 49 percent; zinc-base scrap consumption declined 19 percent, to some 75 thousand tonnes; and copper-base scrap consumption was little-changed from a year earlier—around 114 thousand tonnes. It was estimated that construction materials accounted for 45 percent of domestic consumption in 1983; transportation—23 percent; machinery—12 percent; electrical—9 percent; other—11 percent. Of the slab zinc consumed directly, galvanizing (mostly sheet and strip) accounted for 47 percent; zinc-base alloy—26 percent; brass and bronze—15 percent; rolled zinc, zinc oxide, and other uses—11 percent. Increased domestic use of zinc in 1983 reflected the strong recovery in both residential construction and automobile production. In addition, the use of zinc in coinage increased in 1983. The Bureau of Mines forecast a further increase in domestic consumption of both zinc metal and compounds in 1984.

Total U.S. industry stocks of slab zinc at the end of 1983 were 17 percent below the year-earlier level, at 126,855 tonnes. Stocks held by producers were off 34 percent from the December 31, 1982 level, and merchant stocks were down 26 percent from a year earlier. Consumer stocks (which accounted for about 57 percent of total stocks) were reduced only 6 percent in 1983, to 73,120 tonnes. As of November 30, 1983 the National Defense Stockpile of zinc contained an inventory of 343 thousand tonnes, compared with a goal of 1.29 million tonnes.

The average monthly U.S. producer price for High Grade zinc in 1983 rose from a low of 38.61 cents per pound in January to a high of 48.74 cents in December. The London Metal Exchange (LME) cash price advanced from a March low of 30.745 cents per pound to the year's high of 38.970 cents in November.

Futures Market

Zinc futures are traded on the London Metal Exchange (LME).

Salient Statistics of Zinc in the United States In Thousands of Metric[7] Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production of Slab Zinc						Dec. 31 Stocks at			Consumption					
		Primary			Value Mil. $[6]	Redistilled Secondary	Total Production						Base Scrap[2]			
		Domestic	Foreign	Total				Producer Plants	Consumer Plants	Gov't. Stockpile	Zinc Slab	Ores[2]	Zinc[3]	Copper	Aluminum[4]	Total
1971		403.8	362.7	766.4	162	80.9	847.0	48.6	91.5	140.1	1,254.1	119.3	104.0	166.5	6.9	1,651
1972		401.0	232.2	633.2	170	73.7	707.0	30.1	125.0	949.6	1,418.3	118.3	93.0	191.3	7.9	1,844
1973	64	399.1	184.4	583.5	198	83.2	667.0	25.9	114.3	677.0	1,503.9	129.7	90.5	192.0	7.6	1,932
1974	59	347.0	208.2	555.2	359	78.5	634.0	39.7	211.2	391.6	1,287.7	127.1	87.7	162.5	8.0	1,673
1975[7]	61	279.4	118.0	397.4	366	52.5	449.9	67.7	97.3	349.9	839.4	75.1	177.8	106.3	.5	1,117
1976	59	346.4	106.1	452.6	359	62.2	514.7	88.0	109.9	349.4	1,028.9	91.8	138.4	139.2	.5	1,394
1977	57	322.2	86.2	408.4	309	45.9	454.3	83.8	86.5	347.8	999.5	86.5	139.6	139.6	.6	1,368
1978	66	267.4	139.3	406.7	207	34.8	441.5	37.9	99.3	345.9	1,050.6	90.0	73.2	141.5	.5	1,442
1979	63	255.3	217.1	472.5	220	53.2	525.7	59.1	92.6	345.7	1,000.6	79.7	146.7	166.4	.9	1,394
1980	30	231.9	108.6	340.5	262	29.4	369.9	22.6	69.6	342.4	811.1	59.0	133.0	138.2	1.1	1,142
1981	64	259.8	86.7	346.5	307	50.2	396.8	44.7	81.9	340.6	840.9	60.6	149.3	138.7	.7	1,189
1982[1]	58	193.3	34.9	228.2	255	74.3	302.5	28.2	77.6	340.6	709.5	35.5	93.1	114.3	.7	953.1
1983[5]	66			220.0		75.0	261.8	18.5	73.1		775.3	52.9	75.3	114.2	.7	1,018
1984																

[1] Preliminary [2] Recoverable zinc content [3] Excludes redistilled slab & zinc produced by remelting. [4] Aluminum & magnesium-base scrap [5] Estimate [6] Domestic ores (recoverable content) [7] Data prior to 1975 are in THOUS. OF SHORT TONS. *Source: Bureau of Mines*

T.770

World Smelter Production of Zinc In Thousands of Metric[4] Tons

Year	Australia	Belgium	Canada	France	W. Germany	Italy	Japan	Mexico	Norway	Peru	Poland	Spain	USSR	Un. Kingdom[3]	United States	World Total
1971	285.2	234.5	410.0	241.0	121.7	153.1	789.7	85.8	69.0	63.0	242.5	94.4	717.0	128.4	766.4	5,229
1972	325.2	286.3	524.9	288.3	235.5	171.8	887.7	92.4	80.9	74.0	251.3	109.9	717.0	81.4	633.2	5,656
1973	330.1	309.8	587.0	285.9	283.3	200.6	929.2	78.7	89.2	76.8	259.0	118.0	740.0	92.4	583.5	5,877
1974	305.2	318.3	469.9	305.0	441.0	216.5	936.9	150.9	79.8	78.7	257.0	143.3	750.0	93.0	555.2	6,183
1975	213.1	235.0	470.6	164.9	302.4	198.1	769.7	169.7	67.1	69.7	267.9	147.0	760.0	58.9	438.1	5,526
1976[4]	249.2	241.2	472.3	233.3	304.8	191.2	776.0	175.2	64.4	64.7	237.0	161.1	800.0	41.6	514.7	5,675
1977	256.4	258.2	494.9	238.3	354.8	169.4	805.0	174.4	69.8	66.9	228.0	156.6	815.0	81.5	454.3	5,812
1978	294.8	241.5	495.4	231.2	306.8	177.6	792.7	173.1	71.6	62.9	222.0	177.0	850.0	73.6	441.5	5,882
1979	310.2	265.8	580.4	248.6	355.5	202.3	816.4	161.7	77.8	68.2	209.0	182.7	850.0	76.7	525.7	6,270
1980	306.0	249.2	591.6	252.8	370.6	206.4	785.1	143.9	79.4	63.8	215.3	151.8	865.0	86.7	369.9	6,057
1981	300.4	257.4	619.0	257.1	366.6	180.9	720.5	126.5	80.3	126.2	167.1	179.5	870.0	81.7	396.8	6,112
1982[1]	295.1	260.0	505.0	243.8	335.1	158.7	708.4	127.0	78.7	160.7	165.0	187.0	875.0	79.3	302.5	5,881
1983[2]	320		530					130		180					290	6,000
1984																

[1] Preliminary. [2] Estimated. [3] Some secondary metal included. [4] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines* T.771

U.S. Mine Production of Recoverable Zinc In Thousands of Metric[3] Tons

Year	Arizona	Colorado	Idaho	Illinois	Missouri	Montana	Pennsylvania	New Mexico	New York	New Jersey	Tennessee	Utah	Virginia	Washington	Wisconsin	Total U.S.
1971	7.8	61.2	45.1	12.7	48.2	.4	27.4	14.0	63.4	30.0	119.3	25.7	16.8	5.8	10.6	502.5
1972	10.1	63.8	38.6	11.4	61.9	—	18.3	12.7	60.7	38.1	101.7	21.9	16.8	6.5	6.9	478.3
1973	8.4	58.3	46.1	5.3	82.4	.1	18.9	12.3	81.4	38.0	64.2	16.8	16.7	6.4	8.7	478.9
1974	9.7	49.5	39.5	4.1	92.0	.1	20.3	13.8	93.1	32.8	85.7	12.6	17.2	6.9	8.7	499.9
1975[3]	7.9	44.0	37.1	N.A.	67.9	.1	19.1	10.0	69.5	28.2	75.6	17.8	13.7	N.A.	N.A.	425.8
1976	8.6	45.9	42.3	N.A.	75.8	.1	20.2	N.A.	66.8	30.6	74.9	20.4	10.2	N.A.	N.A.	439.5
1977	4.0	36.5	28.1	N.A.	74.1	.1	20.7	N.A.	64.3	30.4	82.0	16.1	12.0	5.1	N.A.	407.9
1978	N.A.	22.2	32.4	N.A.	59.0	.1	19.1	N.A.	26.5	28.9	87.9	3.5	11.0	N.A.	N.A.	302.7
1979	N.A.	9.9	29.7	N.A.	61.7	.1	21.4	N.A.	12.1	31.1	85.1	N.A.	11.4	—	N.A.	267.3
1980	N.A.	13.8	27.7	N.A.	62.9	.1	22.6	N.A.	33.6	28.9	111.8	N.A.	12.0	—	N.A.	317.1
1981	.1	N.A.	N.A.	N.A.	52.9	—	24.7	N.A.	36.9	16.2	117.7	1.6	9.7	—	—	312.4
1982[1]	—	N.A.	N.A.	N.A.	63.7	N.A.	24.8	—	49.4	16.8	121.3	—	—	—	—	300.3
1983[2]					57.0		17.2			15.7	109.1					273.7
1984																

[1] Preliminary. [2] Estimated. [3] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines* T.772

Consumption of Slab Zinc in the United States, by Industries and Grades In Thousands of Metric[4] Tons

		By Industries							By Grades					
Year	Total	Galvanizers	Brass Products	Zinc-Base Alloy[2]	Rolled Zinc	Zinc Oxide	Light-Metal Alloys	Other	Special High Grade	High Grade	Contin. Galvan. Grade	Contrd. Lead Grade	Prime Western	Remelt
1971	1,254.1	474.8	150.5	516.1	38.9	40.0	—33.8—		683.7	133.1	10.0	102.5	328.0	1.8
1972	1,418.3	518.2	192.1	579.8	45.2	52.0	—31.0—		684.7	147.1	19.0	129.9	397.2	.7
1973	1,503.9	563.8	197.7	598.7	40.8	61.7	—2.93—		739.4	167.5	37.4	132.1	426.6	.9
1974	1,287.7	523.3	181.6	440.3	39.4	65.4	—37.8—		572.9	153.1	26.3	122.1	412.1	1.2
1975[4]	839.4	341.9	104.6	303.2	24.8	35.4	5.3	24.3	397.5	75.7	12.9	71.8	280.9	.7
1976	1,028.9	392.9	150.8	387.4	27.1	35.4	5.2	30.1	500.1	101.1	21.0	94.8	310.7	1.2
1977	999.5	396.4	128.3	367.1	27.4	38.5	5.6	36.1	492.6	91.0	19.7	101.2	293.7	1.2
1978	1,050.6	454.0	141.5	354.1	24.9	37.2	11.0	27.8	491.3	109.7	21.8	98.4	327.7	1.7
1979	1,000.6	452.8	141.4	314.1	22.0	35.5	12.9	21.9	443.1	108.6	22.5	86.8	336.8	2.8
1980	811.1	379.2	98.8	254.2	21.1	27.0	11.1	19.6	354.3	76.2	18.5	70.3	290.3	1.6
1981	840.9	411.0	113.0	243.4	23.2	25.7	8.2	16.5	361.5	97.6	18.2	80.3	275.3	1.2
1982[3]	709.5	342.0	81.1	197.8	37.2	32.4	8.3	10.7	324.8	84.6	24.5	68.7	204.9	2.0
1983[1]	775.3	333.2	103.3	182.5	47.2	21.8	— 9.8—							
1984														

[1] Estimated. [2] Die Casters. [3] Preliminary. [4] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines* T.773

ZINC

Zinc Foreign Trade of the United States In Metric[4] Tons

	Imported for Consumption							Zinc Ore & Manufactures Exported						
								Blocks, Pigs, Anodes, etc.		Wrought & Alloys				
Year	Ores[1]	Blocks, Pigs, Slabs	Zinc Fume	Waste & Scrap	Dross, & Skimmings	Dust, Powder & Flakes	Total Value Thous. $	Unwrought	Unwrought Alloys	Sheets, Plates & Strips	Angles Bars, Rods, etc.	Waste & Scrap	Dust (Blue Powder)	Zinc Ore & Concentrates
1973	154,174	590,751	17,953	1,544	2,328	4,873	304,871	10,574	14,566	2,480	4,503	6,366	666	
1974	133,733	543,806	18,235	2,418	3,863	9,131	479,357	18,865	19,062	3,487	9,591	10,936	1,152	
1975	428,544	374,922	33,327	1,418	3,158	5,739	399,857	2,730	6,897	1,628	11,466	4,448	603	
1976	155,803	695,131	6,927	1,803	12,445	6,009	546,239	1,593	3,513	2,271	7,727	8,171	774	
1977[4]	109,277	503,621	233	9,188	11,739	6,702	411,414	215	899	2,432	4,677	7,445	928	N.A.
1978	106,315	622,470	60	3,310	7,436	8,978	434,376	723	554	2,262	860	14,986	1,803	10,973
1979	87,499	524,130	28	3,259	4,454	3,586	434,677	279	366	1,824	1,451	28,149	966	20,095
1980	182,370	410,163	25	3,470	4,062	3,928	401,134	302	485	2,103	804	29,542	4,512	54,457
1981	245,710	612,007	184	5,782	7,629	7,993	676,299	323	378	1,500	1,160	30,046	5,003	54,232
1982[2]	66,809	456,233	11	2,653	7,104	5,864	409,896	341	863	995	1,028	16,993	2,066	77,289
1983[3]	63,156	617,679	631	3,900	6,508	6,533		427				20,942	1,914	60,168
1984														

[1] Zinc content. [2] Preliminary. [3] Estimate. [4] Data prior to 1977 are in SHORT TONS. *Source: Bureau of Mines* T.774

U.S. Mine Production of Recoverable Zinc In Thousands of Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	23.3	21.7	23.8	21.1	23.0	21.9	20.9	25.4	18.7	23.8	22.2	21.7	267.3
1980	28.7	26.8	28.6	27.2	25.9	27.4	24.9	25.5	24.4	28.6	24.3	24.8	317.1
1981	25.5	25.7	28.5	26.3	25.6	23.9	24.2	25.2	28.9	28.7	26.0	23.9	312.4
1982	24.2	24.7	25.3	23.4	25.6	27.0	21.3	27.4	25.7	27.8	25.9	23.3	303.1
1983	25.0	22.9	25.5	22.9	22.3	21.0	20.0	23.9	22.9	23.8	21.7		
1984													

Source: Bureau of Mines T.774A

U.S. Consumption of Slab Zinc by Fabricators In Thousands of Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	88.4	89.3	96.9	88.4	94.1	90.3	73.6	84.5	72.4	82.4	76.4	71.4	1,000.6
1980	80.4	80.3	82.8	74.1	61.0	55.5	46.8	58.2	66.7	74.6	72.3	70.5	811.1
1981	74.5	73.6	77.3	74.3	73.6	77.2	64.4	72.4	70.2	66.2	59.8	52.0	834.2
1982	55.1	55.3	60.0	57.8	58.8	65.8	56.3	60.7	61.4	60.8	53.7	50.8	697.4
1983	61.8	59.9	68.8	66.7	64.1	65.7	55.8	64.5	67.2	65.5	69.8		
1984													

Source: Bureau of Mines T.774B

Stocks of Slab Zinc[1] (at Smelter) in the United States, at End of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	50.5	37.8	29.4	23.4	21.2	21.3	26.7	23.5	28.0	31.2	32.3	31.8
1973	32.7	31.3	30.4	28.1	24.6	22.2	25.1	27.4	32.3	31.6	29.7	29.3
1974	29.8	25.1	22.9	18.8	17.6	19.1	19.6	18.1	20.3	22.3	30.9	42.9
1975	64.4	86.0	108.0	115.7	116.0	108.6	90.5	73.5	61.0	54.0	60.7	67.4
1976	73.4	74.6	67.5	68.0	67.6	69.3	73.0	64.6	59.1	72.6	82.7	88.8
1977	90.5	84.2	58.9	67.9	78.9	77.3	74.9	64.7	59.7	60.3	65.3	65.8
1978	64.3	62.8	56.9	50.0	40.9	32.5	31.8	27.4	30.1	26.9	32.9	38.4
1979	39.9	38.0	37.5	44.5	46.7	45.1	51.8	58.1	57.5	56.3	66.0	61.5
1980	47.5	34.0	31.9	31.4	36.9	42.8	42.1	35.4	30.1	23.4	20.6	20.6
1981	18.4	18.8	20.9	17.6	17.2	17.9	20.9	22.9	21.5	27.0	34.9	38.1
1982	40.4	45.4	46.1	44.0	39.0	30.8	22.6	16.5	17.6	22.0	23.7	27.1
1983	24.2	24.4	21.4	19.8	21.2	22.4	22.2	15.0	10.6	16.0	17.8	18.4
1984	18.4	15.9	17.4	16.5								
1985												

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[1] Figures include zinc produced from foreign ores as well as domestic ores. *Source: American Bureau of Metal Statistics, Inc.* T.777

Smelter Production of Slab Zinc[1] in the United States (Includes GSA Metal) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	61.8	56.1	63.1	60.5	59.6	52.6	55.1	55.3	56.9	57.0	54.6	55.3	687.9
1974	50.4	48.8	52.1	47.7	51.5	48.4	49.2	44.7	46.2	49.9	51.5	49.8	590.2
1975	52.1	45.0	45.1	42.7	34.1	29.7	26.9	28.0	32.2	33.5	35.7	40.9	445.9
1976	45.8	45.3	47.2	46.5	47.5	45.3	45.0	39.9	40.6	46.6	41.2	45.1	536.0
1977	45.6	39.6	43.6	42.9	37.2	31.9	26.8	25.4	26.0	34.2	40.0	40.9	434.1
1978	39.2	33.0	30.4	33.5	35.7	34.5	34.5	37.6	37.3	44.2	42.4	42.6	444.8
1979	45.7	46.1	52.9	51.1	49.9	43.0	44.0	42.0	39.8	46.0	43.4	33.5	537.4
1980	30.5	30.6	34.8	32.1	31.9	28.5	20.8	26.7	28.6	31.0	29.9	33.2	358.6
1981	33.4	31.5	34.5	34.1	32.2	30.8	33.0	33.5	29.4	29.8	29.3	25.3	376.8
1982	26.7	23.8	23.6	21.3	23.7	23.7	20.6	22.4	26.5	27.3	20.6	19.9	280.3
1983	20.0	22.8	25.0	24.7	25.9	24.0	17.6	25.6	25.1	26.5	27.3	24.1	288.5
1984	25.5	24.3	23.9										
1985													

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[1] Smelter & refinery production from domestic & foreign ores. *Source: American Bureau of Metal Statistics, Inc.* T.775

Domestic Shipments of Slab Zinc[1] in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	67.1	73.5	74.0	68.0	75.5	74.4	63.2	71.4	56.6	65.7	65.0	60.2	814.6
1973	63.6	62.5	67.0	64.8	65.2	58.3	59.2	59.8	55.6	57.8	59.1	53.7	726.5
1974	50.1	57.7	58.3	60.2	63.1	54.0	56.8	55.6	52.0	52.7	45.1	38.3	643.9
1975	30.8	23.6	23.1	35.2	33.8	37.1	44.9	45.0	44.8	40.4	29.0	34.2	421.7
1976	39.8	44.1	54.3	46.0	47.9	43.6	41.2	48.3	46.1	33.0	31.2	39.0	514.6
1977	44.0	45.9	68.9	33.8	26.2	33.5	29.2	35.6	31.0	33.5	35.0	40.4	457.1
1978	40.7	34.5	36.3	40.3	44.8	42.9	35.1	42.0	34.7	47.3	36.4	37.1	472.2
1979	44.2	47.9	53.5	44.1	47.7	44.5	37.4	35.7	40.3	47.3	33.7	37.9	514.3
1980	44.5	44.2	36.8	32.7	26.4	22.6	21.5	33.4	34.0	37.6	32.7	33.3	399.6
1981	35.6	31.1	32.3	37.4	32.6	30.2	30.0	31.5	30.8	24.3	21.4	22.0	359.2
1982	24.4	18.8	22.9	23.4	28.7	31.9	28.7	28.6	25.4	23.0	18.9	16.5	291.3
1983	22.9	22.6	28.0	26.3	24.4	22.8	17.9	32.8	29.5	21.2	25.5	23.5	297.3
1984	28.0	22.8	24.8										
1985													

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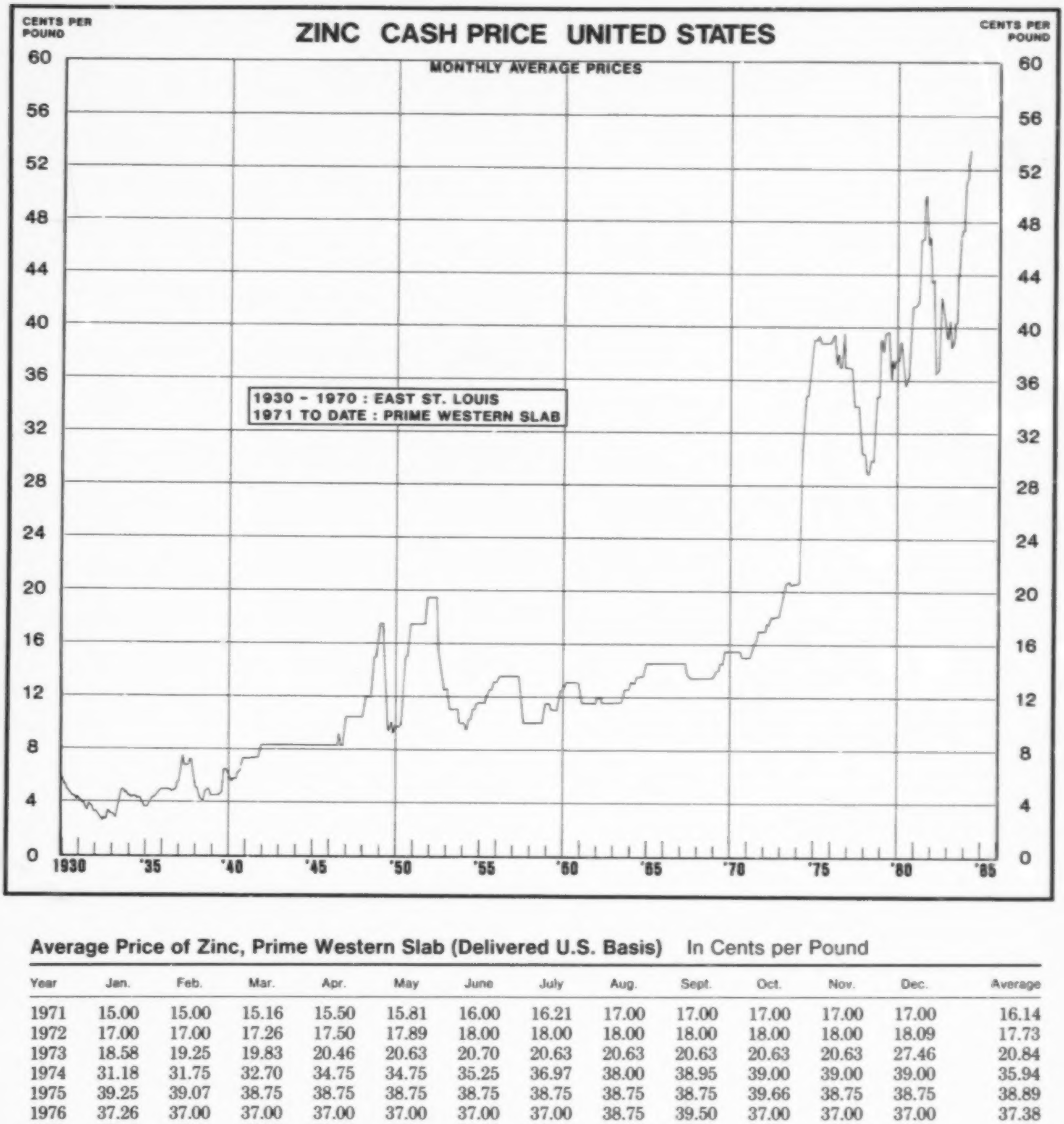
[1] Does not include export shipments & Gov't. account shipments. *Source: American Bureau of Metal Statistics, Inc.* T.776



Average Price of Zinc, Prime Western Slab (Delivered U.S. Basis) In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	15.00	15.00	15.16	15.50	15.81	16.00	16.21	17.00	17.00	17.00	17.00	17.00	16.14
1972	17.00	17.00	17.26	17.50	17.89	18.00	18.00	18.00	18.00	18.00	18.00	18.09	17.73
1973	18.58	19.25	19.83	20.46	20.63	20.70	20.63	20.63	20.63	20.63	20.63	27.46	20.84
1974	31.18	31.75	32.70	34.75	34.75	35.25	36.97	38.00	38.95	39.00	39.00	39.00	35.94
1975	39.25	39.07	38.75	38.75	38.75	38.75	38.75	38.75	38.75	39.66	38.75	38.75	38.89
1976	37.26	37.00	37.00	37.00	37.00	37.00	37.00	38.75	39.50	37.00	37.00	37.00	37.38
1977	37.00	37.00	37.00	37.00	35.64	34.00	34.00	34.00	34.00	31.74	30.66	30.50	35.21
1978	30.50	30.26	29.00	29.00	29.00	29.95	30.00	31.92	32.75	33.66	34.75	34.75	31.30
1979	35.00	36.90	38.09	39.50	39.50	39.55	39.63	36.82	36.03	37.50	36.88	37.50	37.74
1980	37.50	38.70	38.92	38.50	37.50	36.55	35.50	35.98	37.46	38.48	39.69	41.63	38.03
1981	41.63	41.63	42.13	43.73	46.55	46.63	46.67	49.74	49.88	46.41	46.75	43.65	45.45
1982	43.31	43.56	43.56	36.39	36.64	36.69	38.86	40.00	42.21	42.50	40.80	38.99	39.95
1983	40.20	40.35	38.38	38.73	40.38	40.38	41.51	44.03	46.38	47.09	49.38	49.38	43.02
1984	51.10	51.38	52.84	53.38									
1985													

Source: American Metal Market T.778

Conversion Factors

The following equivalents are among those most commonly used in international agricultural trade:

METRIC EQUIVALENTS

1 hectare	(ha)	equals	2.471	acres
1 liter	(l)	equals	1.0567	liquid quarts
1 kilogram	(kg)	equals	2.204622	pounds
1 tonne	(1,000 kgs)	equals	2,204.622	pounds

1 metric ton equals:
2,204.622 lbs.
22.046 hundredweight
10 quintals

Bushel weights:
Wheat & soybeans = 60 lbs.
Corn, sorghum & rye = 56 lbs.
Barley (grain) = 48 lbs.; Barley (malt) = 34 lbs.
Oats = 32 lbs.; Rapeseed = 50 lbs.

Bushels to metric tons:
Wheat & soybeans = bushels × .027216
Barley = bushels × .021772
Corn, sorghum, rye = bushels × .025400
Oats = bushels × .014515

One metric ton (tonne) 1,000 kilograms =
36.7437 bushels wheat or soybeans
39.3679 bushels corn, sorghum, rye, flaxseed
45.9296 bushels barley
68.8944 bushels oats
44.092 rapeseed
22.046 cwt. rice

Area:
1 Acre = .404694 hectares
1 Hectare = 2.4710 acres

Yields:
Wheat = bushels per acre × 0.6725 = quintals per hectare
Rye, corn = bushels per acre × 0.6277 = quintals per hectare
Barley = bushels per acre × 0.5380 = quintals per hectare
Oats = bushels per acre × 0.3587 = quintals per hectare

Commodity	Unit	Approximate net Weight U.S.	Approximate net Weight Metric
		pounds	kilograms
Apples	Northwest box[1]	44	20
Barley	Bushel	48	21.8
Butter	Box	64	29
Castor Beans	Bushel	41	18.6
Castor Oil	Gallon	8[2]	3.6
Corn (shelled)	Bushel	56	25.4
Corn Oil	Gallon	7.7[2]	3.5
Cotton	Net Bale	480[3]	218
Cottonseed	Bushel	32[4]	14.5
Cottonseed Oil	Gallon	7.7[2]	3.5
Eggs (average size)	Case of 30 dozen	47	21.3
Flaxseed	Bushel	56	25.4
Flour (various)	Bag	100	45.4
Honey	Gallon	11.84	5.4
Linseed Oil	Gallon	7.7[2]	3.5
Milk	Gallon	8.6	3.9
Molasses (inedible)	Gallon	11.74	5.3
Oats	Bushel	32	14.5
Olives	Lug[5]	25–30	11.3–13.6
Olive Oil	Gallon	7.6[2]	3.5
Onions (dry)	Sack	50	22.7
Oranges (Fla. & Tex.)	Box[6]	90	40.8
Palm Oil	Gallon	7.7[2]	3.5
Peanuts (unshelled, Runners, Southeastern)	Bushel	21	9.5
Peanut Oil	Gallon	7.7[2]	3.5
Potatoes	Bag	50	22.7
Rapeseed	Bushel	50 and 60	22.7–27.2
Rice (rough)	Bushel	45	20.4
Rosin	Drum, net	520	236
Rye	Bushel	56	25.4
Sorghum Grain	Bushel	56	25.4
Soybeans	Bushel	60	27.2
Soybean Oil	Gallon	7.7[2]	3.5
Sugarcane: sirup	Gallon	11.45	5.2
Sunflower Seed	Bushel	24 and 32	10.9–14.5
Tobacco (flue-cured)	Hogshead	950	431

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[1] Approximate inside dimensions 10½ × 11½ × 18".
[2] Commonly used in trade. Actual weights vary according to temperature conditions.
[3] Estimated at 478 lbs. prior to 1946. Actual bale weights vary considerably.
[4] Average weight in most states.
[5] Approximate inside dimensions 5¾ × 13½ × 16⅛".
[6] Approximate inside dimensions 12 × 12 × 24".

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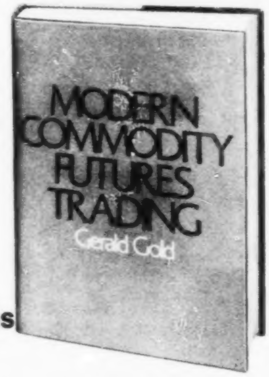

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INTRODUCTION

Total futures trading in the United States increased 6.5 percent in 1984, to establish a new record volume of 149.1 million contracts.

Significant gains were registered in the trading of futures on financial instruments, foreign currencies and stock indices—which together accounted for about 28 percent of total trading activity in 1984. These gains were influenced by increased uncertainties about the direction of interest rates and foreign exchange rates, the course of economic activity, and confidence in the banking and financial system.

However, futures trading in agricultural commodities, which accounted for about 33 percent of total trading activity in 1984, declined as increasing world supplies of most commodities, and the strong dollar, brought prices down to the vicinity of government support levels.

Shifting global commodity supply/demand and price relationships in response to changes in the economic climate, government trade policies, and weather developments emphasize the importance of a continuing evaluation of unfolding events as they relate to preceding years. This also holds for the non-agricultural/industrial markets, especially with respect to interest and foreign exchange rates, monetary and fiscal policy, and economic data.

Commodity Year Book 1985 is designed to facilitate the relating of unfolding developments to past data in the analysis of commodity prices, financial instruments, foreign currencies, and stock index futures. Valuable tables, text and price charts provide important comparisons for these and other markets. The feature studies in Commodity Year Book 1985 are presented to help the reader evaluate and take advantage of potentially profitable trading opportunities in some of these markets.

"Understanding the Eurodollar market," our first feature study, should be of great interest to both speculators and interest rate hedgers. Futures trading in Eurodollars increased fourfold in 1985 and also in the first quarter of 1985 compared with year-earlier periods. Trade participation is active, with hedgers accounting for about two-thirds of outstanding futures commitments. This valuable study shows how Eurodollars present an alternative source of funds for banks as well as a market for lending dollars. Hedging interest rate risks and the "Ted" spread (which involves Eurodollar futures vs. T-bill futures) are also discussed. The author, John Morris, is Midwest Bureau Chief of the *American Banker*. He began his financial reporting career with England's domestic financial news wire and is a frequent contributor to trade publications.

Soybean oil, which is consistently among the leaders in futures trading, accounts for the largest share of world fats and oils production but is faced with increasing competition from other edible fats and oils. Our second feature article "Soybean Oil and Its Competition" discusses in depth, and places in perspective, the shifting factors that influence the production, consumption and price of soybean oil. The author, Walter L. Emery, has been director of research for CRB for the past 15 years and is editor of the weekly CRB Futures Market Service.

Our third feature study "Guidelines to Corporate Hedging" by William J. Johnson, should be required reading for every corporate executive charged with the responsibility of initiating or administering a hedge program. It stresses the importance of linking a hedge program to corporate strategic objectives as they relate to purchasing, marketing, manufacturing and planning. The author is president of Reef Points, Inc., of Allentown, Pa., a consulting firm specializing in futures hedging, and is also a past contributor to this publication.

Knowledge of the composition of a specific futures market can, at times, be of considerable technical value to a futures trader. The Commodity Futures Trading Commission (CFTC) issues a report each month entitled "Commitments of Traders in Commodity Futures," which provides a breakdown of month-end open interest by category of trader, including shifts in the composition of the market from the previous month. This report is usually issued 11 days after the end of the month under review.

In a valuable feature study, "Analysis of the CFTC Commitments of Traders Reports Can Help You Forecast Prices," William L. Jiler shows how deviations from seasonal norms in open interest by category of trader can be identified and used as a tool for price forecasting. Included in this study are seasonal charts of commitments of traders by categories for major commodities which are not available elsewhere. Mr. Jiler is past editor of CRB Futures Chart Service and past president of Commodity Research Bureau, and is a well-known authority on technical market analysis.

We wish to express our appreciation for the assistance provided us by governmental agencies, particularly the U.S. Department of Agriculture and the U.S. Bureau of Mines; various trade associations and publications; and other organizations. We have attempted to list all of these institutions on page 4T.

The Editorial Board
May 1985

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ACKNOWLEDGMENTS

The editors wish to thank the following for source material

- Aluminum Association
- American Bureau of Metal Statistics
- American Gas Association
- American Iron and Steel Institute
- American Metal Market
- American Paper and Pulp Association
- American Petroleum Institute
- Atomic Industrial Forum, Inc.
- Chicago Board of Trade
- Chicago Mercantile Exchange
- Citrus Associates of the N.Y. Cotton Exch., Inc.
- Coffee, Sugar & Cocoa Exch., Inc.
- Commodity Exchange, Inc.—N.Y.
- Commodity Futures Trading Commission
- Edison Electric Institute
- Exxon Corp.
- F. W. Dodge Corp.
- Federal Power Commission
- Federal Reserve Board
- Futures Industry Association
- General Services Administration
- Gill & Duffus Ltd.
- Handy & Harman
- International Cotton Advisory Committee
- International Monetary Market (Chicago)
- Kansas City Board of Trade
- MidAmerica Commodity Exchange
- Minneapolis Grain Exchange
- National Coffee Association of U.S.A., Inc.
- New York Cotton Exchange
- New York Futures Exchange
- New York Mercantile Exchange
- Newsprint Service Bureau
- Nuclear Regulatory Commission
- Oil World
- Portland Cement Association
- Rubber Manufacturers Association
- Rubber Study Group
- Society of the Plastics Industry, Inc.
- Leather Industries of America, Inc.
- Tea Council, Inc.
- Textile Economics Bureau, Inc.
- Textile Organon
- United Nations Organization
- United States Department of Agriculture
- United States Department of Commerce
- United States Department of Energy
- United States Department of Interior
- United States Department of Labor
- United States Bureau of Mines
- United States Tariff Commission
- United States Treasury Department
- Winnipeg Commodity Exchange
- Wool Services Co.
- Zinc Institute, Inc.

The Commodity Price Trend

Commodity prices in general trended lower from late spring throughout the remainder of 1984. The Commodity Research Bureau Futures Price Index, which measures price expectations for some months in the future, declined 12 percent in 1984, to 244.2 percent of its 1967 base. This level was 14 percent below its 1984 high of 284.2 registered on May 21—which had marginally exceeded its U.S. drought-related 1983 high.

The decline in the CRB Futures Price Index was paced by a 26 percent drop in the Precious Metals group in response to a combination of persistent strength in the U.S. dollar and a continued reduction in the U.S. inflation rate. The Livestock & Meat group, however, bucked the overall downtrend in prices, advancing to the highest level since late 1980, influenced by rising real disposable income, and projections of reduced red meat production in 1985.

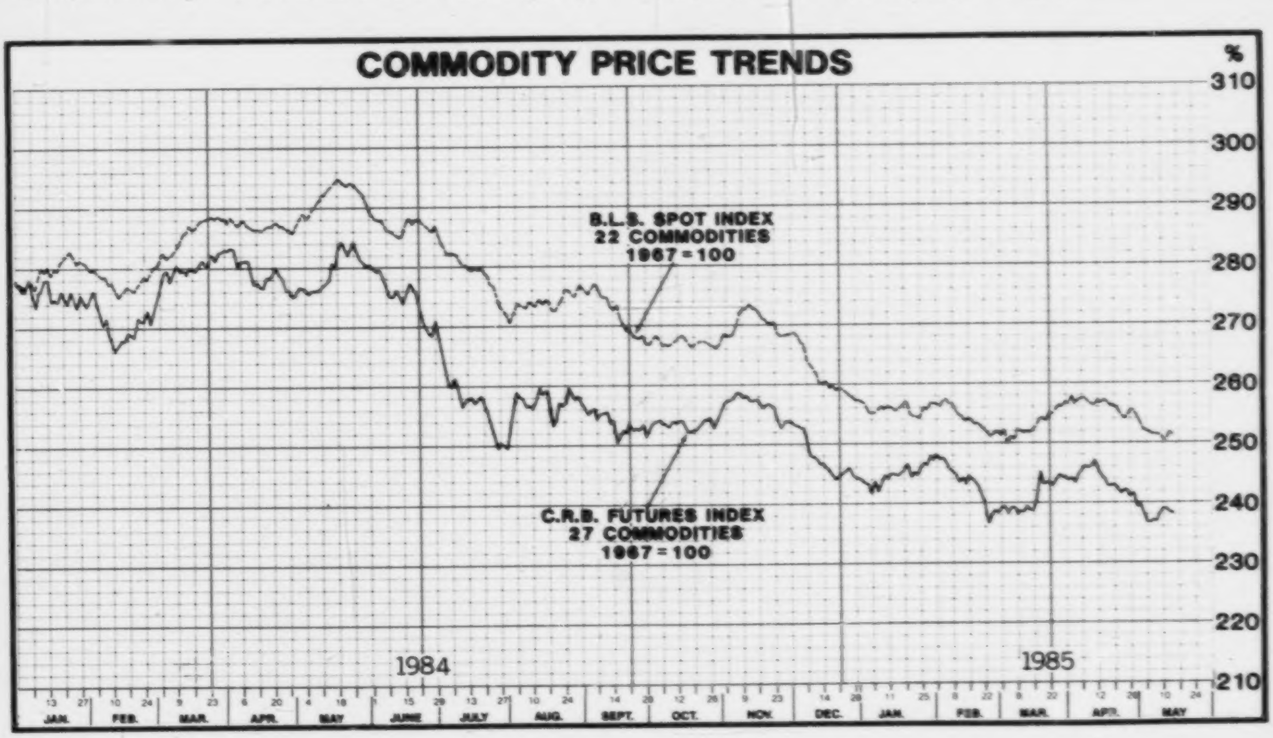
The CRB (BLS-Formula) Spot Market Index, which measures the current price for physical commodities, declined 7 percent in 1984, to 257.2 percent of its 1967 base, and 13 percent below its 1984 high of 294.8 recorded on May 18. The Raw Industrials sub-index dropped 8 percent, primarily because of weakness in the metals and rubber. The Foodstuffs sub-index was off 6 percent in 1984, mainly because of easier grain prices.

Fluctuations in the exchange value of the U.S. dollar were credited with exerting an important influence on commodity prices in 1984, as the dollar soared to record highs against some currencies and long-term highs against others, extending into early 1985.

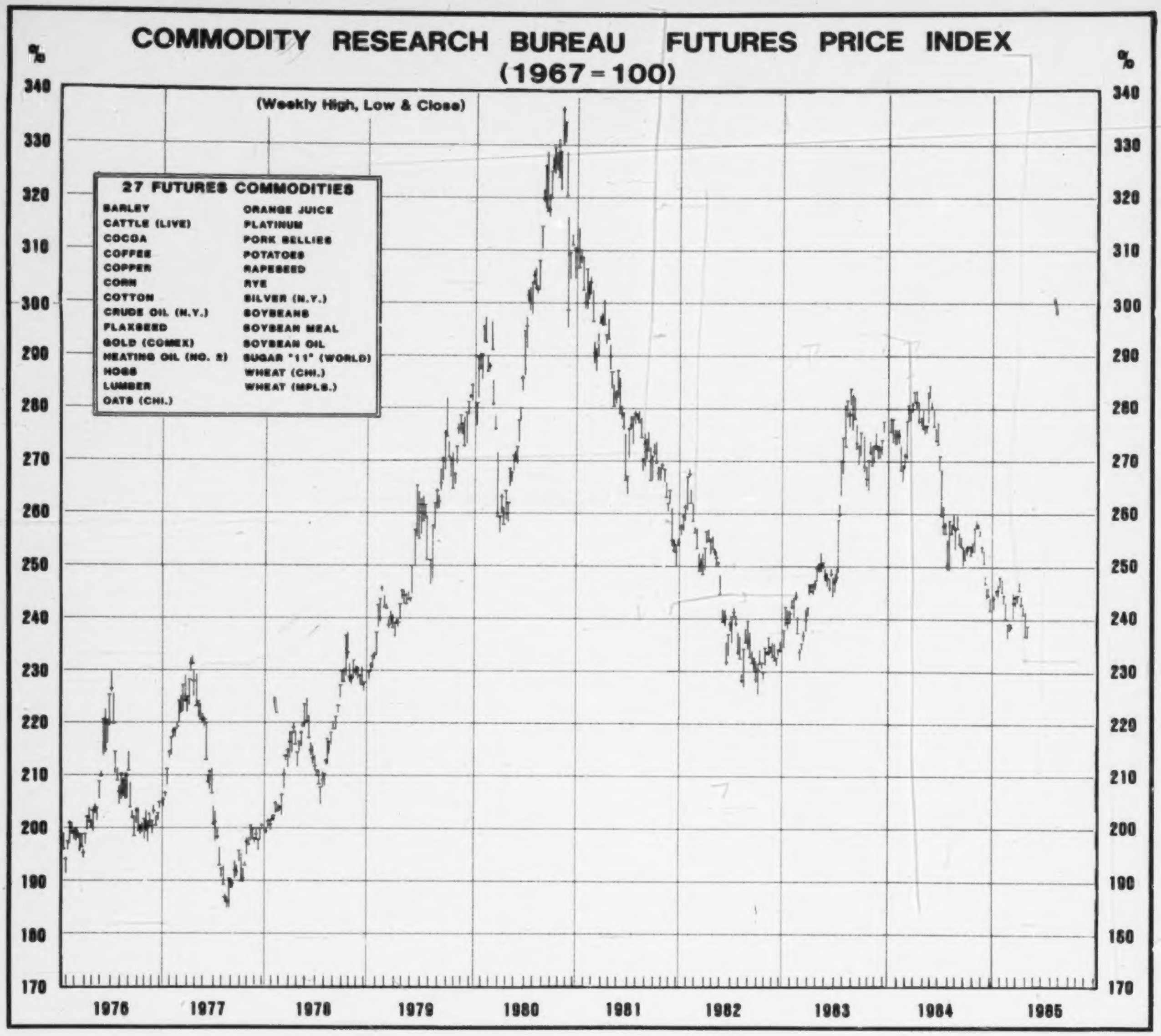
The domestic purchasing power of the U.S. dollar, as measured by the Consumer Price Index (CPI), continued to trend lower throughout 1984, to 31.7 cents (1967=$1.00) in December vs. 32.9 cents a year earlier.

Early in the second quarter of 1985, markets were faced with many of the unresolved problems which had a bearing on the overall commodity price level in 1984. A major consideration was the trend of the U.S. dollar in foreign exchange markets and the related movement of U.S. interest rates. Dollar strength throughout much of 1984 and extending into early 1985 reflected high U.S. interest rates (partly related to the federal budget deficits), the relatively strong U.S. economy, and the perception abroad that the U.S. provided a safe haven for investment funds. However, late in the first quarter of 1985 doubts arose about the viability of at least two of these pillars which supported the dollar. The collapse of two smaller U.S. government securities dealers and related problems at some thrift institutions raised questions about the health of the U.S. banking and financial system and exerted an adverse influence on the exchange value of the dollar. A slower-than-expected rise in the first quarter Gross National Product and the sluggish performance of some other economic indicators raised questions about the health of the U.S. economy and contributed to easier interest rates. Further developments in these areas are expected to influence the general level of commodity prices.

The outlook for any significant acceleration in the U.S. inflation rate appeared subdued early in the second quarter of 1985, other than for that which might occur as a result of any material pressure on the U.S. dollar. The supply/demand outlook for most agricultural commodities and for crude oil did not appear conducive to sustained price firmness.



COMMODITY RESEARCH BUREAU FUTURES PRICE INDEX (1967=100)



CRB Futures Price Index, Monthly High, Low & Close 1967 = 100

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Range
1981	High	314.5	306.9	298.4	300.7	290.0	286.0	279.7	279.7	276.0	274.0	269.8	264.8	314.5
	Low	299.2	296.7	287.5	287.7	280.7	263.9	266.6	268.1	266.8	266.6	260.7	250.5	250.5
	Close	300.1	296.7	298.4	289.1	287.5	263.9	279.3	269.4	268.6	268.9	262.2	254.9	—
1982	High	267.2	268.6	257.5	257.3	253.3	242.0	242.4	238.4	239.8	234.3	236.3	235.7	268.6
	Low	256.0	256.5	248.7	252.5	244.9	231.5	233.2	227.1	227.9	225.8	231.2	231.1	225.8
	Close	267.2	256.5	250.1	253.1	244.9	239.3	233.7	235.4	227.9	229.9	235.7	234.0	—
1983	High	242.7	245.1	242.1	247.3	252.7	249.5	261.7	281.6	283.8	275.4	275.6	277.6	283.8
	Low	234.8	232.1	232.8	244.7	247.2	244.2	245.2	263.5	272.5	264.6	265.9	270.4	232.1
	Close	242.7	232.1	242.1	246.7	249.7	246.2	259.9	278.7	273.5	264.6	273.9	277.6	—
1984	High	278.3	276.1	283.0	283.2	284.2	280.3	268.3	259.8	256.3	254.8	258.7	253.2	284.2
	Low	273.2	266.1	274.7	275.1	275.3	268.4	249.4	253.3	250.3	252.0	252.7	244.0	244.0
	Close	273.6	272.5	283.0	275.1	280.1	271.0	249.4	257.1	251.4	254.8	253.8	244.2	—
1985	High	247.9	248.1	245.2	247.1									
	Low	241.7	236.6	238.2	239.3									
	Close	247.1	238.2	244.4	239.3									

Source: Commodity Research Bureau, Inc.

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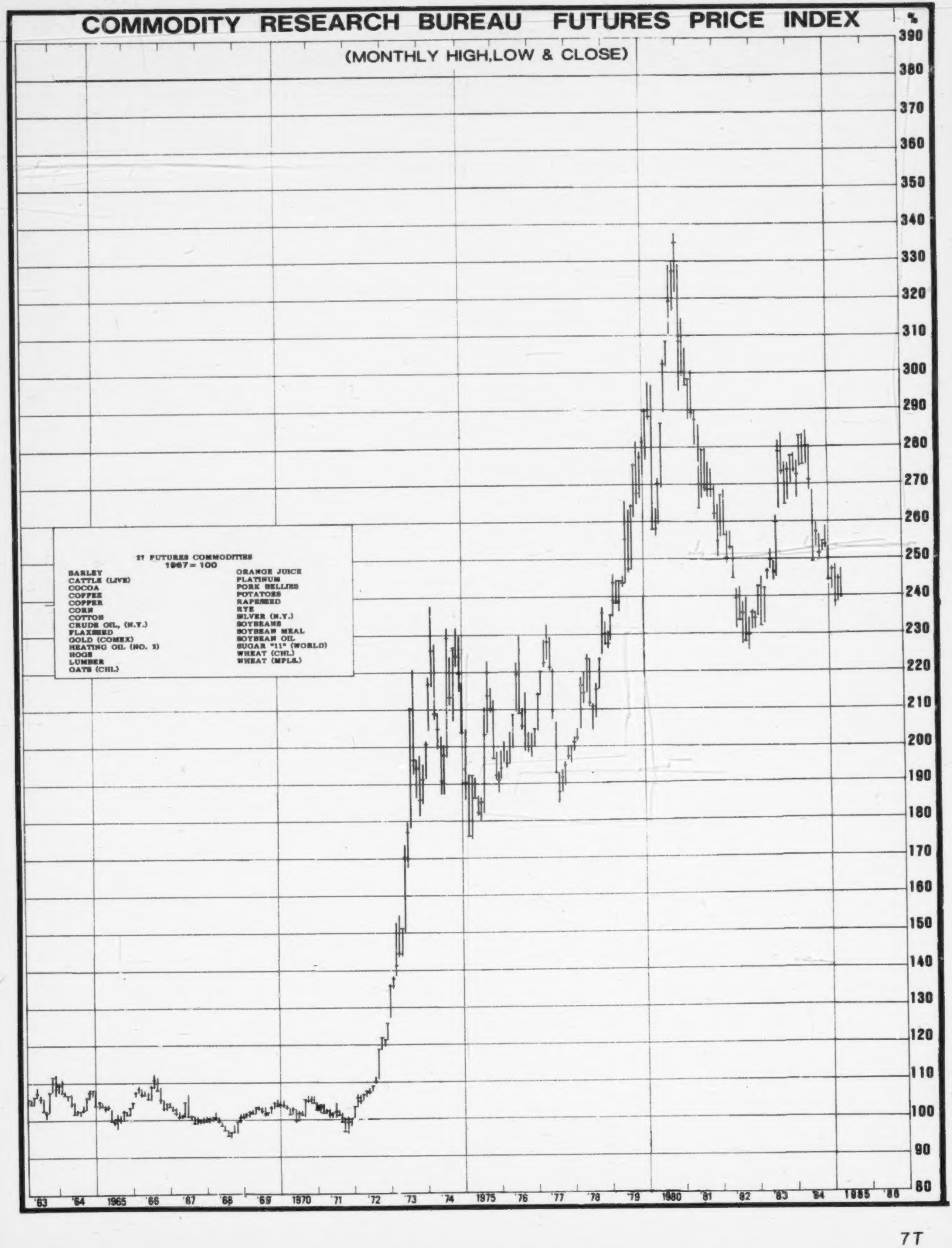
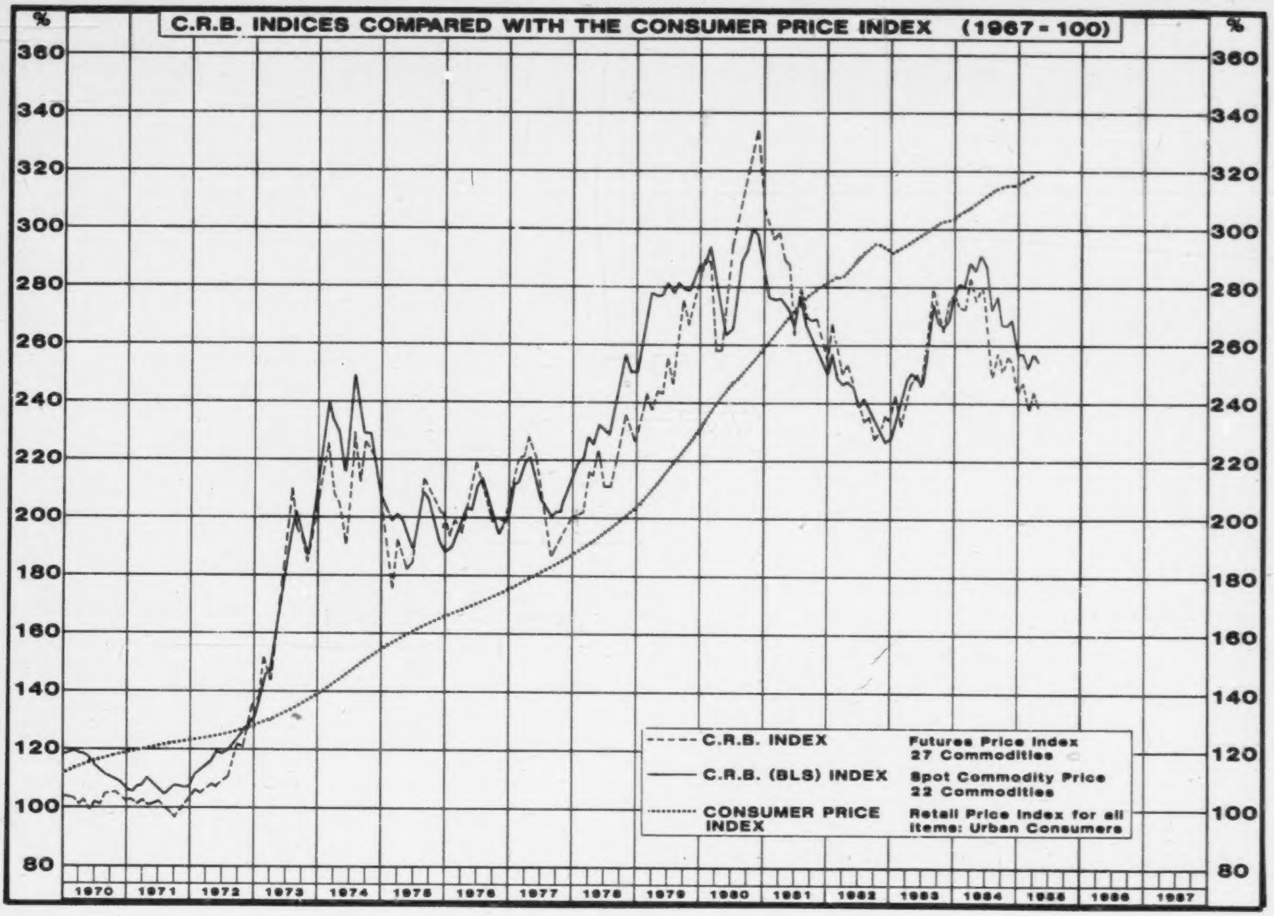
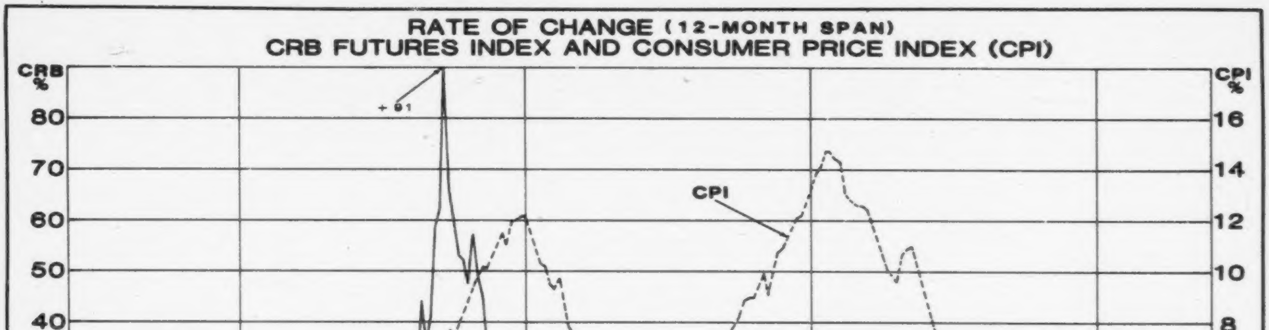
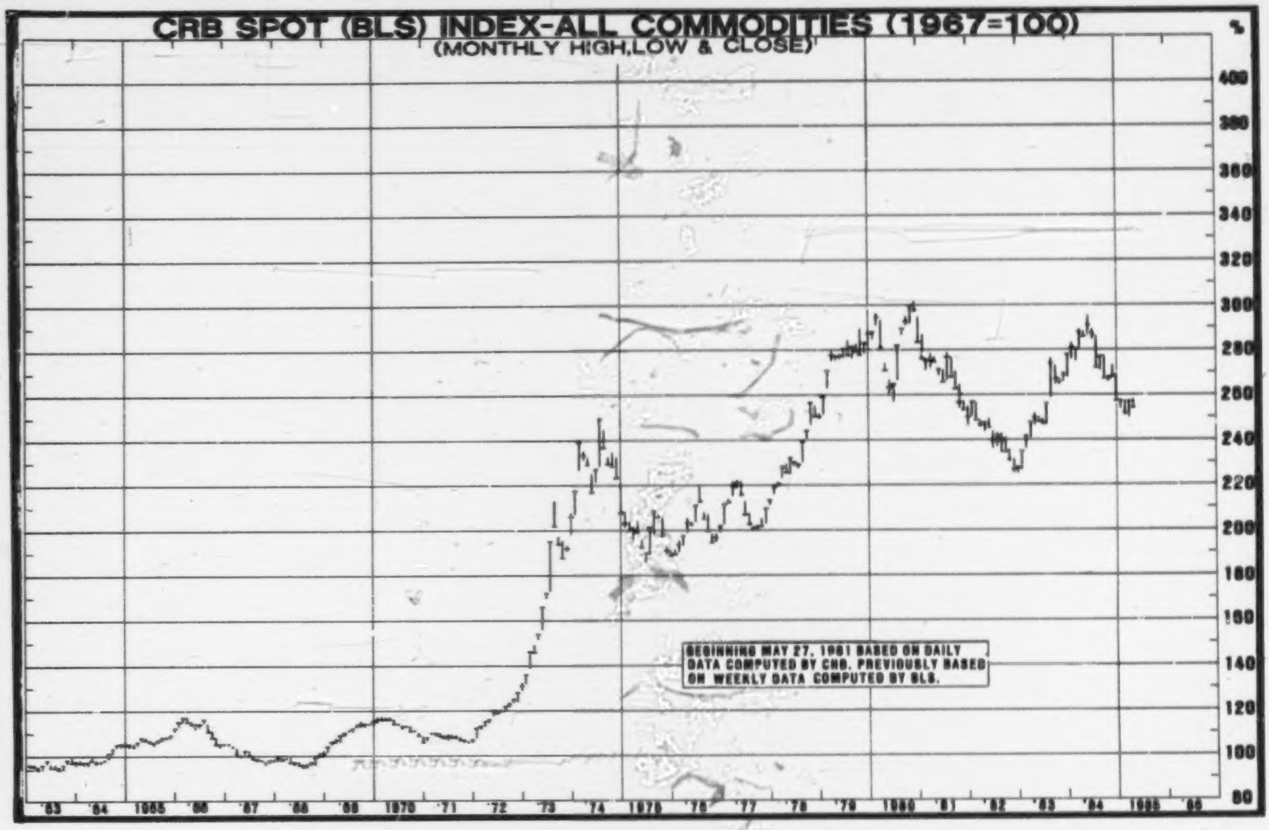
COMMODITY RESEARCH BUREAU FUTURES PRICE INDEX

(MONTHLY HIGH,LOW & CLOSE)



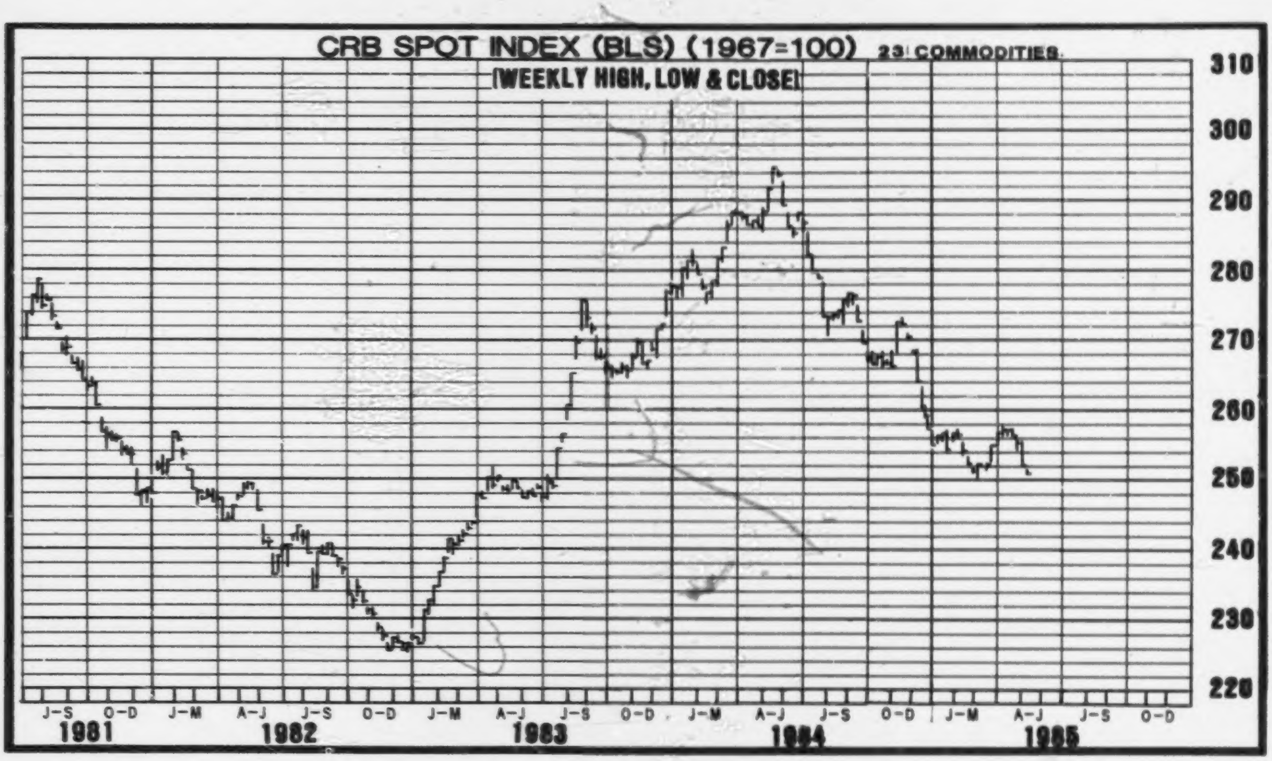

C.R.B. INDICES COMPARED WITH THE CONSUMER PRICE INDEX (1967 = 100)
%
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
----- C.R.B. INDEX
Futures Price Index
27 Commodities
——— C.R.B. (BLS) INDEX
Spot Commodity Price
22 Commodities
········· CONSUMER PRICE INDEX
Retail Price Index for all items: Urban Consumers
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987


RATE OF CHANGE (12-MONTH SPAN)
CRB FUTURES INDEX AND CONSUMER PRICE INDEX (CPI)
CRB %
80
70
60
50
40
30
20
10
0
-10
-20
CPI %
16
14
12
10
8
6
4
2
0
-2
-4
+ 91
CPI
CRB
− 22.1
− 22.7
1967
'68
'69
'70
'71
'72
'73
'74
'75
'76
'77
'78
'79
'80
'81
'82
'83
'84
'85
'86

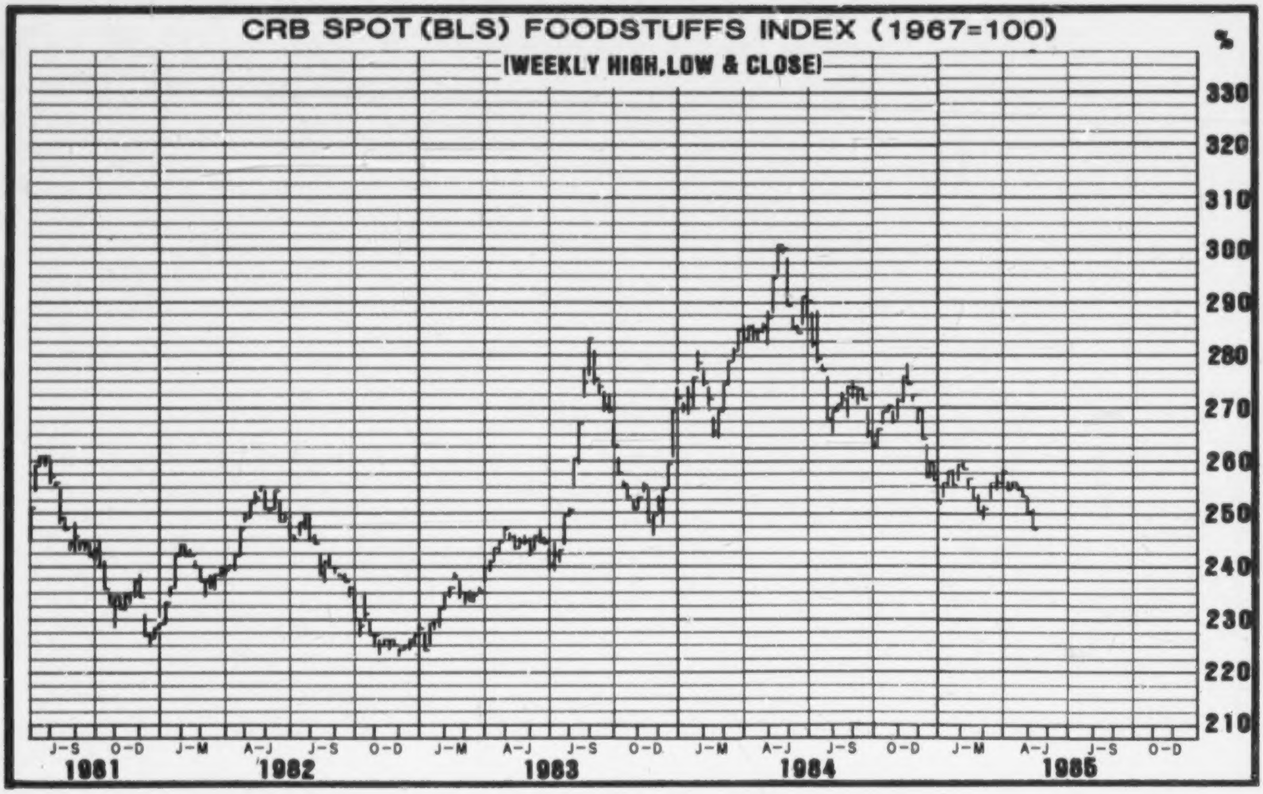


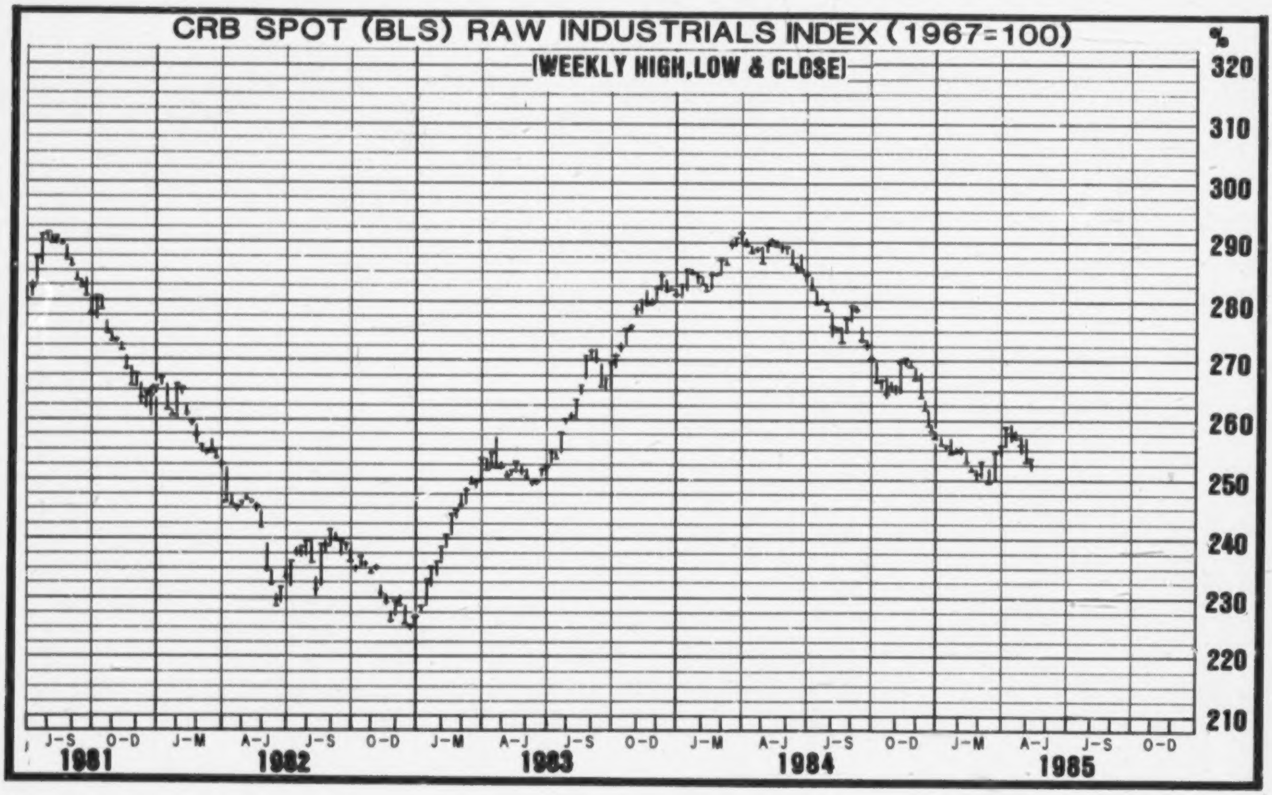
CRB SPOT (BLS) INDEX-ALL COMMODITIES (1967=100)
(MONTHLY HIGH, LOW & CLOSE)

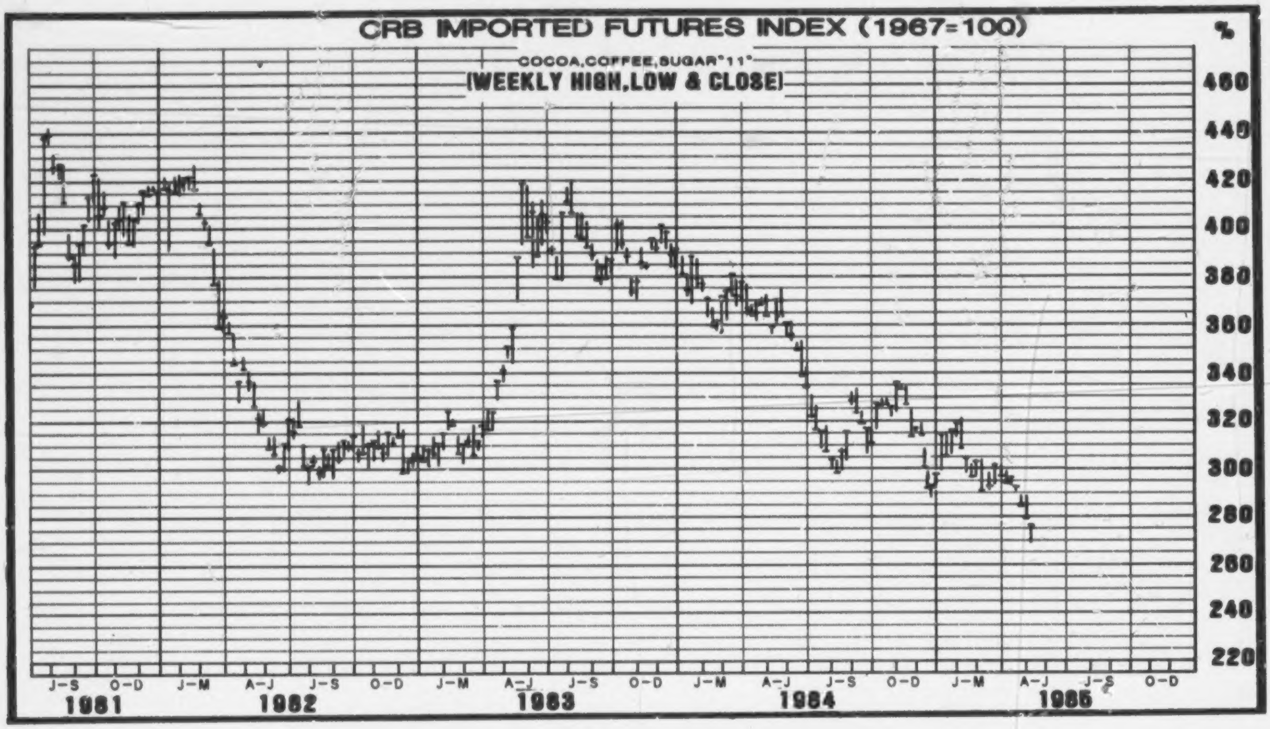
BEGINNING MAY 27, 1981 BASED ON DAILY DATA COMPUTED BY CRB. PREVIOUSLY BASED ON WEEKLY DATA COMPUTED BY BLS.



CRB SPOT INDEX (BLS) (1967=100) 23 COMMODITIES
(WEEKLY HIGH, LOW & CLOSE)


CRB SPOT (BLS) FOODSTUFFS INDEX (1967=100)
(WEEKLY HIGH,LOW & CLOSE)
%
330
320
310
300
290
280
270
260
250
240
230
220
210
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
1981
1982
1983
1984
1985

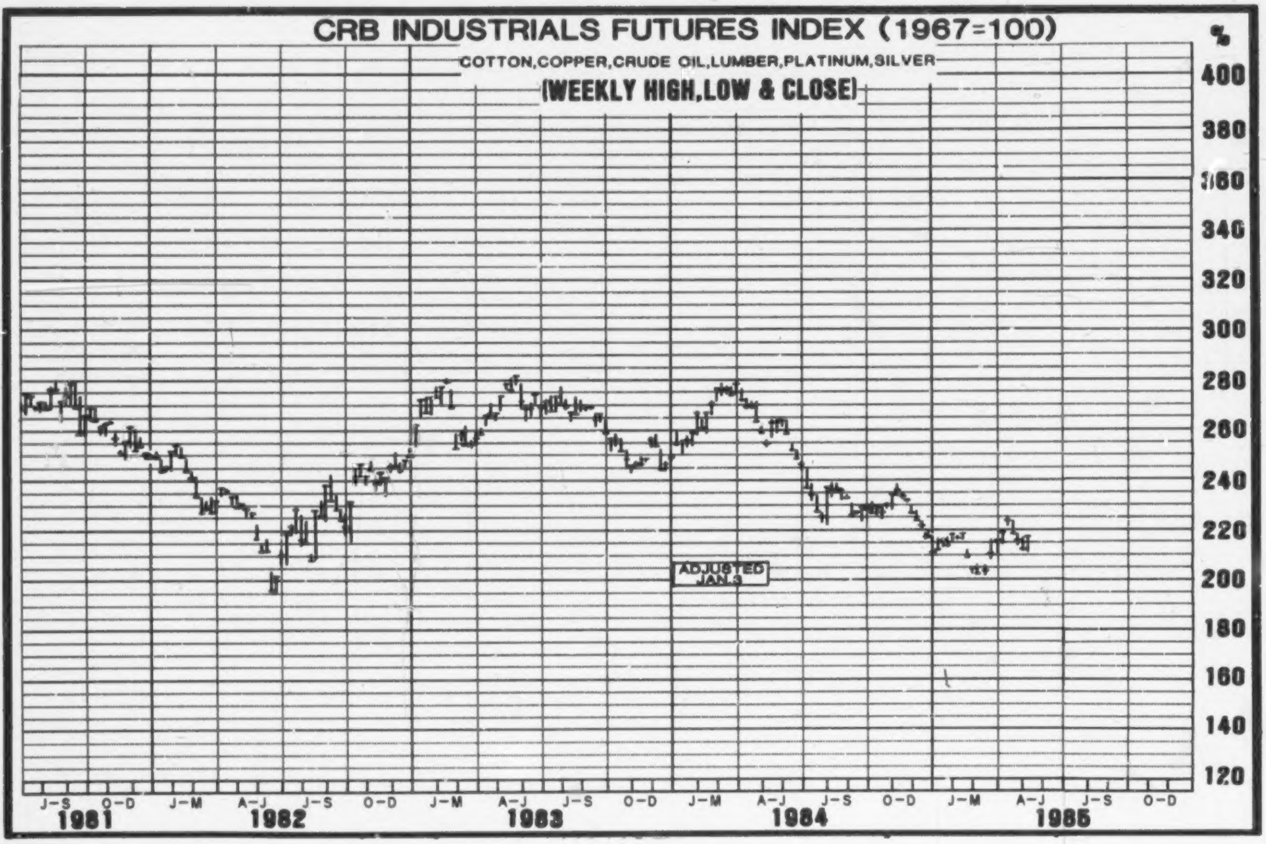

CRB SPOT (BLS) RAW INDUSTRIALS INDEX (1967=100)
(WEEKLY HIGH,LOW & CLOSE)
%
320
310
300
290
280
270
260
250
240
230
220
210
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
1981
1982
1983
1984
1985



CRB IMPORTED FUTURES INDEX (1967=100)

COCOA,COFFEE,SUGAR"11"

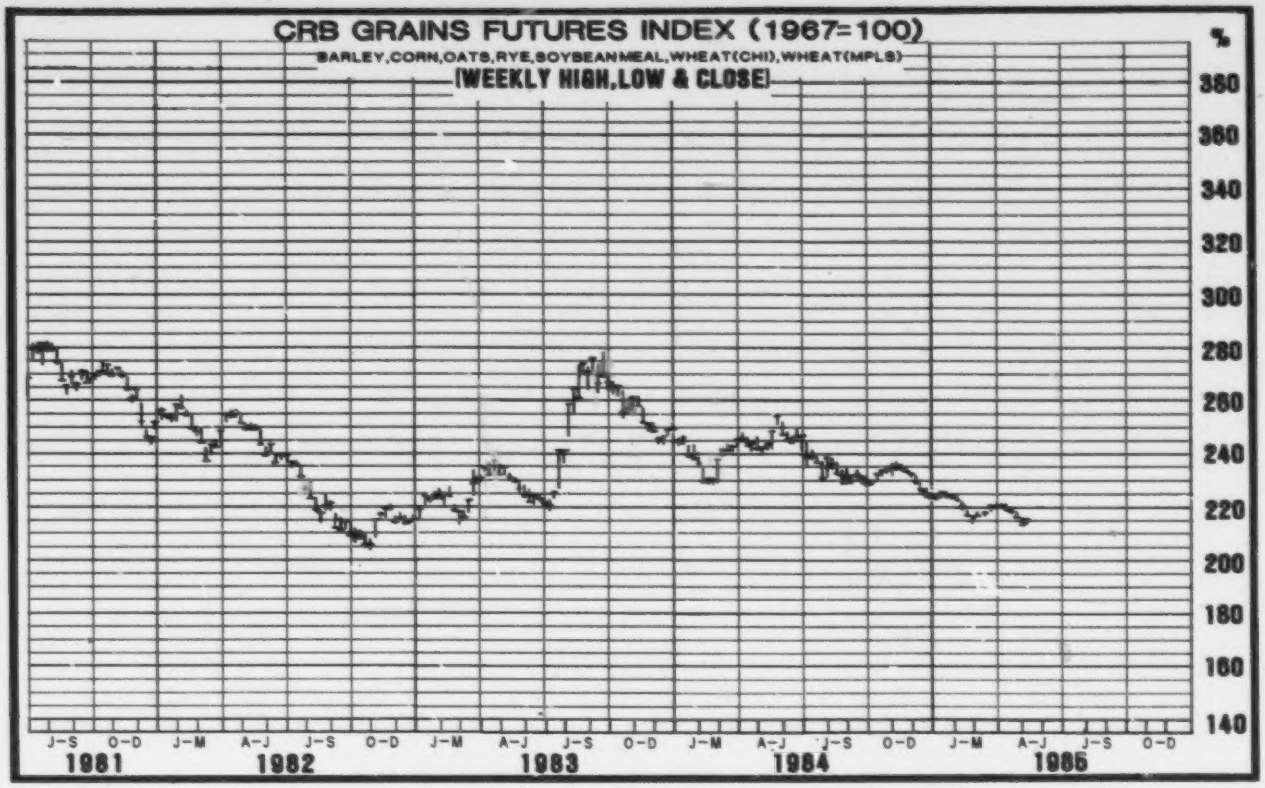
(WEEKLY HIGH,LOW & CLOSE)

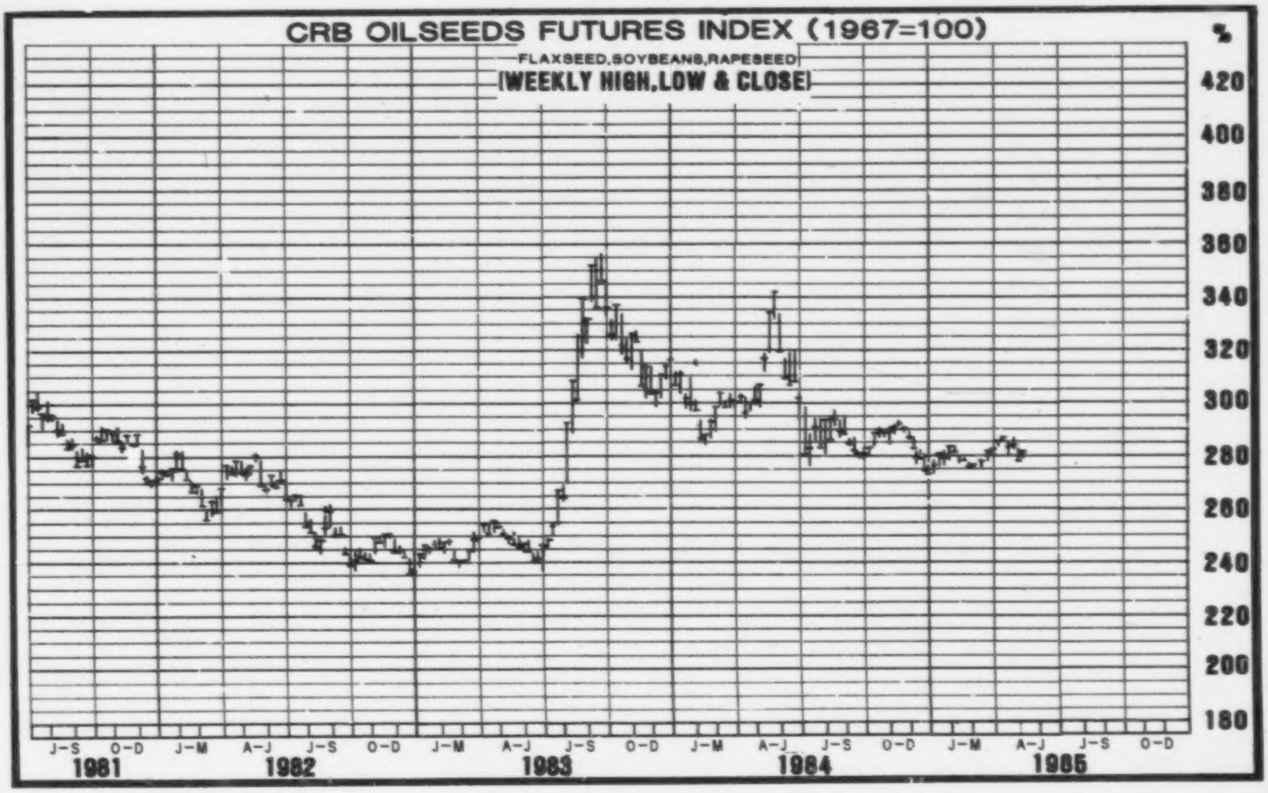


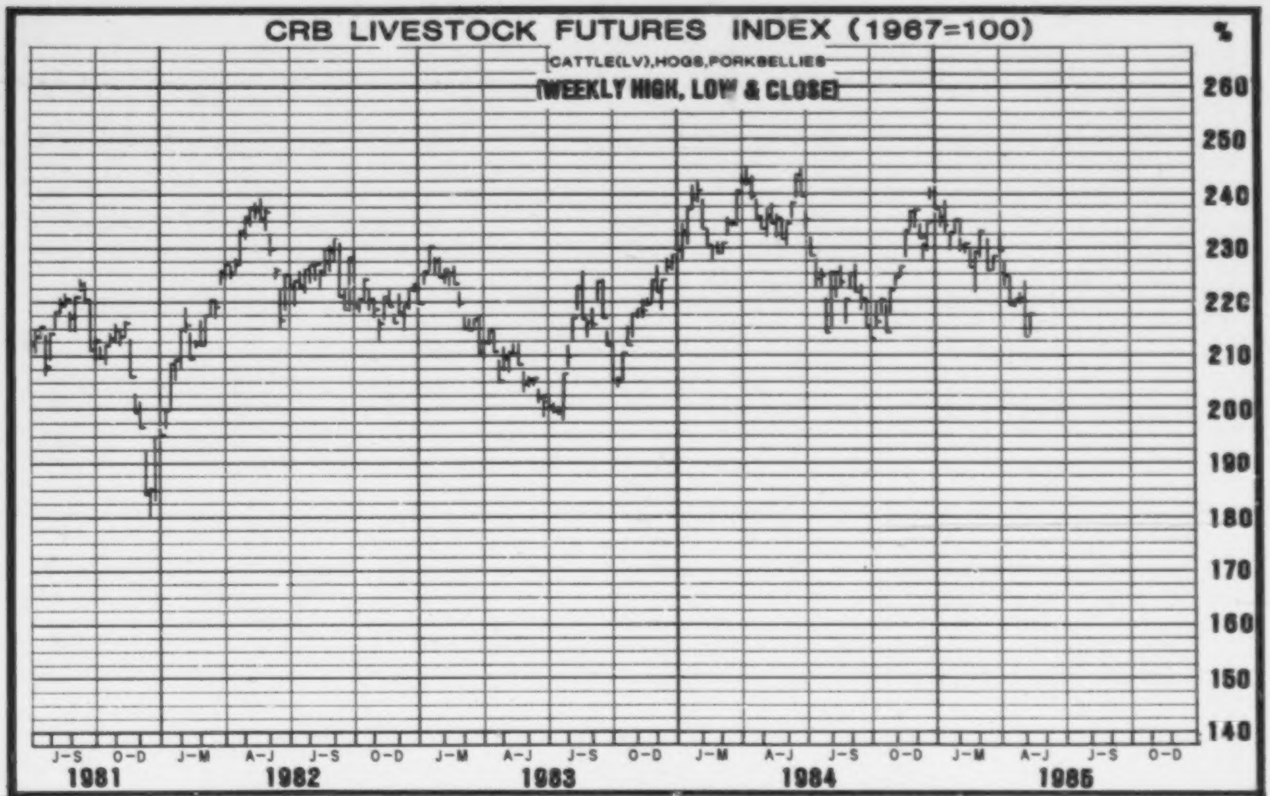
CRB INDUSTRIALS FUTURES INDEX (1967=100)

COTTON,COPPER,CRUDE OIL,LUMBER,PLATINUM,SILVER

(WEEKLY HIGH,LOW & CLOSE)


CRB GRAINS FUTURES INDEX (1967=100)
BARLEY,CORN,OATS,RYE,SOYBEANMEAL,WHEAT(CHI),WHEAT(MPLS)
(WEEKLY HIGH,LOW & CLOSE)
%
380
360
340
320
300
280
260
240
220
200
180
160
140
J-S
O-D
J-M
A-J
1981
1982
1983
1984
1985

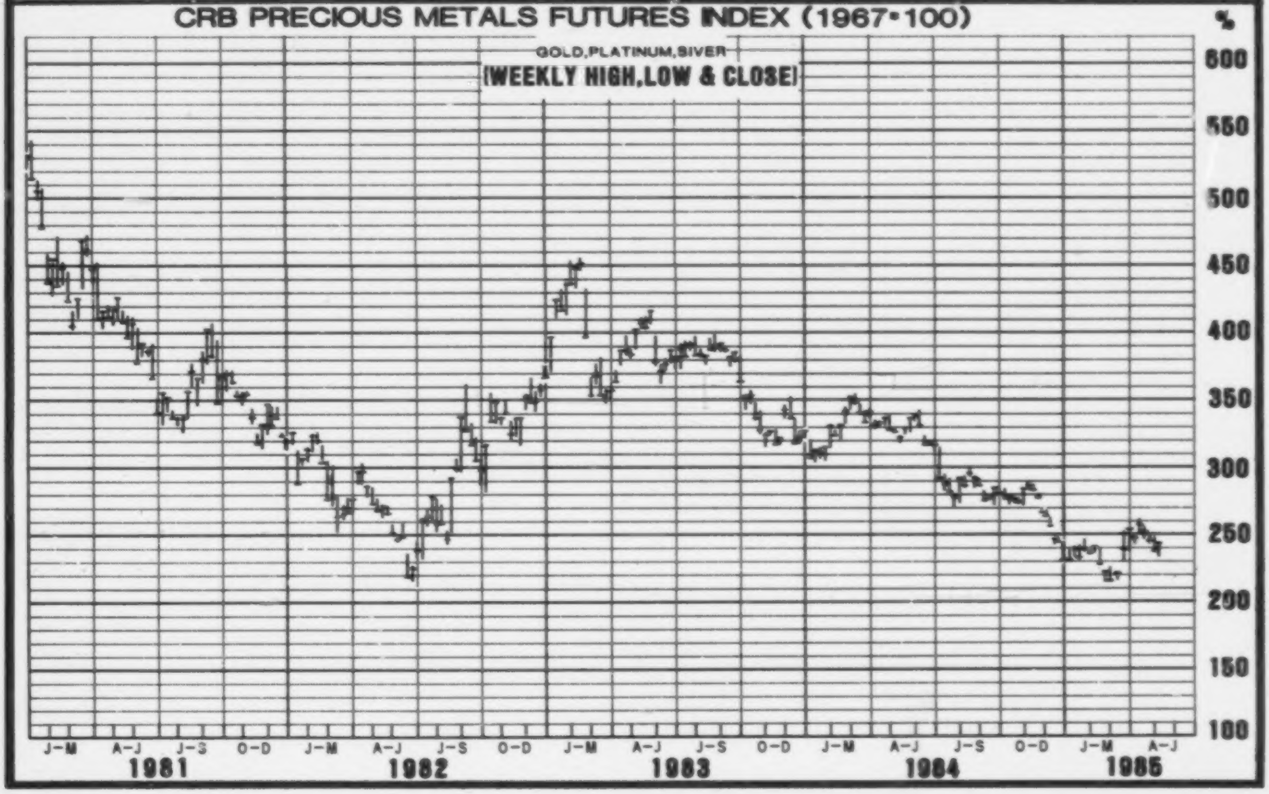

CRB OILSEEDS FUTURES INDEX (1967=100)
FLAXSEED,SOYBEANS,RAPESEED
(WEEKLY HIGH,LOW & CLOSE)
%
420
400
380
360
340
320
300
280
260
240
220
200
180
J-S
O-D
J-M
A-J
1981
1982
1983
1984
1985



CRB LIVESTOCK FUTURES INDEX (1967=100)

CATTLE(LV),HOGS,PORKBELLIES

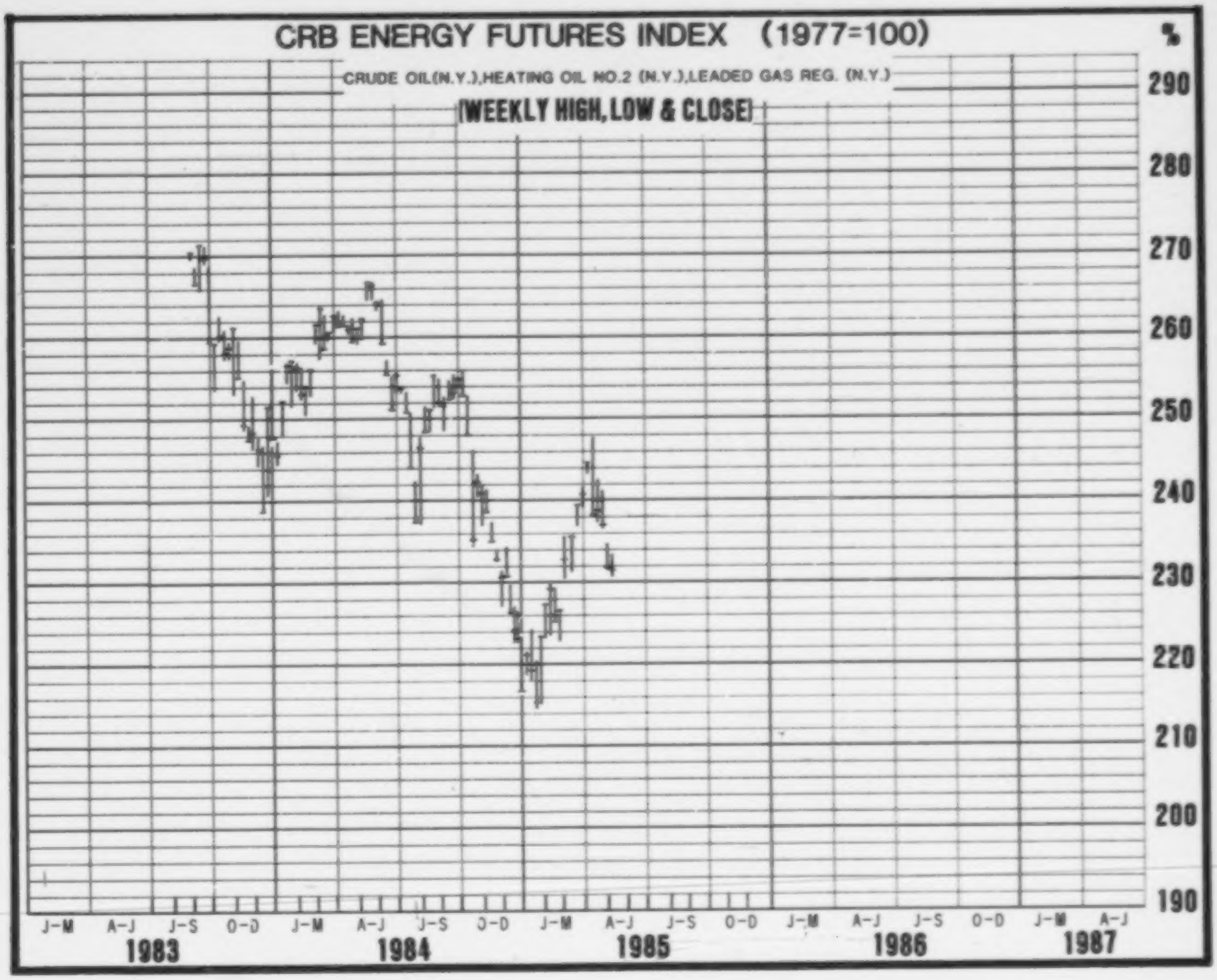
(WEEKLY HIGH, LOW & CLOSE)



CRB PRECIOUS METALS FUTURES INDEX (1967=100)

GOLD,PLATINUM,SIVER

(WEEKLY HIGH,LOW & CLOSE)



How to keep your Commodity Year Book statistics up-to-date continuously throughout the year.

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UNDERSTANDING THE EURODOLLAR MARKET

BY JOHN MORRIS

We can thank the Russians for Eurodollars! Without their socialist suspicion of capitalism, the Western world would probably never have developed the ultimate medium for rolling hot money around the globe.

This uncounted, unregulated, mysterious and elusive market has now become as vital to international business as oil to a machine; indeed, it was oil—Arab oil—that presented the market with its severest test and proved its worth. Without the Eurodollar market the billions of dollars amassed by members of the Organization of Petroleum Exporting Countries after their numbing oil price rise of 1972 could not have been smoothly recycled to the struggling Third World nations.

No one knows the size of the Eurodollar market. But the best estimates—by the Morgan Guaranty Trust Company of New York—suggest that Eurodollars accounted for fully 80% of the $2.2 trillion markets in all Eurocurrencies at the end of June 1984 (yes, there are other Euros besides Eurodollars, including Eurosterling, Euroyen and Euromarks). In comparison, America's broadly-defined money supply M3 totalled $3 trillion at the end of December 1984, while the narrowly-defined M1 was a mere $557 billion. Eurodollars have held their share of the Eurocurrency markets since 1972, bobbing between 72% and 80% of all Eurocurrency transactions. Growth has been extremely rapid: in 1972 the gross Euromarket was a relatively small $740 billion, and it took only 12 years to triple in size!

But these totals can be a little misleading. If a bank lends a Eurodollar to another bank, which in turn lends it to another, it's possible that the same Eurodollar could be counted several times. Such bank-to-bank pass-the-Eurobuck deals made up nearly $1.7 trillion of the June 1984 total of $2.2 trillion in Eurocurrency transactions. (If it sounds a bit like a dog chasing its tail, it is. The head might come around 100 times, but there is still only one dog!) Of the remainder, central banks of various countries accounted for $89 billion, while everyone else—the real borrowers, such as countries and corporations—tallied $451 billion. Again, compared with America's money supply M1, that amount is not insignificant.

How Eurodollars Are Created

So what is a Eurodollar? And what have the Russians got to do with it? *Simply, a Eurodollar is a dollar working abroad. More specifically, and precisely, it is a dollar-denominated deposit at a commercial bank outside the United States.* Most are in Europe, but they can be anywhere. Any other Eurocurrency is the money from one country on deposit in a bank in another country; for example, British pounds sterling lodged in a bank in Germany become Eurosterling. An American-domiciled bank lending dollars to a French conglomerate is not dealing in Eurodollars, but in normal dollars; however, when these are finally deposited in an overseas bank by the borrower, they become Eurodollars; or should the loan be made in dollars by a foreign branch of the American bank, then these, too, are Eurodollars.

They are created in various ways: foreign holders of dollar-deposits at American banks can transfer their deposits to foreign banks; foreigners receiving payment by checks drawn on accounts at American banks can deposit the dollars in banks in their countries; Americans can transfer their dollar-deposits in American banks to foreign banks; and holders of other foreign currencies can exchange them for dollars and deposit them in a foreign bank. The crux of the definition of a Eurodollar is that it is deposited somewhere, outside the United States.

Once a foreign bank has the deposit, it will re-lend it. And so the dog starts chasing its tail as the same Eurodollars get lent and re-lent, all the while creating new dollar-denominated assets and liabilities.

The Russians started it back in the early 1950s, according to an apocryphal story told by the Federal Reserve Bank of Chicago. A limited market in dollar-denominated deposits developed around that time as some communist countries became concerned that if they expropriated American property, or upset the Americans, their dollar holdings in U.S. banks might be blocked or confiscated in retaliation. So they placed their dollars on deposit with banks in Europe, who subsequently lent them to Europeans (and Americans) while maintaining dollar-denominated liabilities on their books in favor of the communists. At that time one of the major suppliers of dollar deposits to European banks was a "branch" of the Russian state bank in Paris, the Banque Commerciale pour l'Europe du Nord, S.A., whose international telex code was "Eurobank."

Since most transactions in foreign exchange markets were—and still are—made by cable, transfers of dollars to or from that bank bore its "Eurobank" cable designation. Before long, foreign exchange traders and banks involved in dollar transactions began referring to dollar deposits obtained from that bank as "Eurodollars," and the name stuck even after other suppliers entered the market.

Kenneth Bernauer of the Federal Reserve Bank of San Francisco states there were other reasons that set the scene. "The sterling crisis of 1957 precipitated the formation of the Eurodollar market," he says. The Suez fiasco and worsening inflation in Britain had forced the pound lower and prompted the Government to react by imposing capital controls, including curbs on borrowing and lending of nonresident sterling by British banks. This marked the beginning of the end for sterling as the currency of international trade—and the beginning of the rise of the dollar.

Coincidentally, America imposed a levy on the sale of foreign bonds and equities in the U.S.; and restrictions on American outward direct investment virtually forced U.S. companies wanting to expand abroad to borrow their dollars abroad, too. Just as important was the now-unwound regulation Q that set limits on the amount of interest American banks could pay on time and checking deposits. This did not apply to deposits booked at foreign branches of U.S. banks, which were also free of reserve requirements. Bank branches abroad could offer their corporate customers a competitive rate on time deposits, and help the customers recoup some of the interest lost on domestic deposits. "The freedom from reserve requirements and interest rate restrictions, therefore, gave Euromarkets a competitive edge," says Bernauer.

Alternative Fund Source and Market

Banks were quick to notice the economic advantages of this freedom from regulation: Euromarkets often offered an alternative, and sometimes cheaper, source from which to borrow funds to finance domestic loans (especially in times of tight domestic monetary policy), and a more lucrative market in which to lend dollars. Not having to bear the cost of putting aside reserves against deposits, and not being limited in the amount of interest paid, made all the difference.

This difference mostly benefits depositors. When an American domestic bank pays 10% for funds, its real cost, taking into account the penalty of putting aside non-interest bearing reserves and paying Federal deposit insurance, can be around 13%. A Eurobank, freed of these encumbrances, can go ahead and offer 12% to attract funds. It's not hard to see where the hot money will roll, given the choice of earning 10% or 12%—to the Euromarkets.

Euromarket interest rates often appear to be higher than American rates. In reality, they are about the same when those hidden costs are taken into account. Should they fall too low, American banks will swiftly switch their funding to the cheapest source (remember: there are no reserves or hidden insurance) and quickly bid the rate into line again. Should they rise too far, even more money will flock to the higher yield, so much so that it will push the rate downwards and back into line. This process is called arbitrage.

Eurodollar Risks

However, there is no free lunch. When an investor—or a depositor—gets a higher yield, there is usually an increased risk somewhere along the line. In Eurodollars there are three such risks. First, Eurodollar deposits are not insured. Second, they are booked at banking offices that do not have direct access to the Federal Reserve's discount window, and who therefore have no immediate backer of last resort should they suffer a liquidity crisis. And third, Eurodollars are outside the jurisdiction of the United States (while to some their main attraction is that they are beyond the reach of American law, to others this has a negative connotation in that it removes another layer of protection).

Some countries are perceived as more risky than others when it comes to political stability, and Eurodollars there carry an extra risk premium. London's risk premium tends to be the smallest of all, while it tends to be higher in parts of Asia.

Country risk premiums have narrowed considerably since the early days of Eurodollars. Apart from a couple of scares, nothing of lasting importance has happened to upset the market as did the collapse of the German Herstatt bank in 1974. Following that event, many countries increased their supervision of banking, and most bank managers upgraded their internal controls. In all, quality improved.

In addition, there has been a growing perception that the monetary authorities in each country would stand behind their banks and prevent a world-shaking default. The Federal Reserve's backing of the crumbling Continental Illinois National Bank and Trust Co. in 1984—which gave rise to the Fed's so-called "too-big-to-fail" policy regarding big banks—enabled that bank to continue to find some funds in the Euromarket (although at the height of its crisis it suffered a shortfall due to the vastly curtailed number of banks that would do business with it). Now the feeling seems to be that the Euromarkets are too important to let domestic events disrupt them. Thus the American authorities would probably stand behind the U.S. parent of a failing overseas branch bank, effectively preventing a total collapse. However, the reluctance of the Italian authorities to back the Luxembourg branch of the Banco Ambrosiano when it ran into trouble indicates that this resolve might be stronger in some countries than in others.

For borrowers, there is not so much difference between American and Eurodollar rates as there is for the depositor. While the Eurobanks work on a narrower price spread between deposits and loans because they don't have those hidden costs, they pay more in yield for their funds (though sometimes they can narrow that spread enough to offer cheaper loans). Risks that bother depositors leave borrowers indifferent—a rate is a rate, no matter where it is and to whom it is paid. And why should a borrower worry about political risk or the bank's default, so long as he has his loan?

Economic Function

Does the Euromarket perform a useful function? The answer is an emphatic "yes." Now that the dollar is the world's chief reserve and trading currency, it only makes sense that people can make or take payment in dollars without having to wire funds through New York. This pool of dollars beyond America's borders has already demonstrated its ability to adapt to rapidly changing financial conditions. What it has done is to bring every major bank in every country into world finance, thus spreading risk across international boundaries.

Imagine what would have happened if no country but America could have taken the huge dollar surpluses that OPEC nations amassed after their cartel held the world to ransom. Those deposits—which totalled $325 billion between 1974 and 1980—would have swamped American banks, and made them dangerously vulnerable to large withdrawals by the Arabs. At the same time, the countries that most desperately needed to borrow to pay for the higher-priced oil wanted to borrow in dollars to pay for the oil in dollars. How much would the American banks alone have lent them? No bank lends more than a certain amount to any one country (or individuals, for that matter). But every major bank in the world outside America was vying for those Arab deposits, and most re-lent them where they were needed. The risk was spread around.

Eurodollars have provided a ready pool of funds, and a ready source of money for borrowers.

Since the huge borrowing needs that followed the oil price shocks, syndication of loans among banks has become commonplace. Had it not been for Euromarkets, this practice probably would not have developed nearly so fast. The size of the credits threatened to overwhelm any single bank, forcing the banking industry to share the larger loans among its members. Usually the borrower selects a lead manager who underwrites the loan and sells a piece of the action to banks throughout the world. Again, in this way, risk is spread across a broad geographic area. The end result is that individual nations' banking systems have been spared the prospect of disruption by world financial events. Some, however, still made more loans to struggling countries than now seems prudent. But without the Euromarkets, the situation could have been much worse.

Who Uses Eurodollars

Who uses the Euromarkets? Mostly banks. According to Morgan Guaranty's figures, bank-to-bank deals accounted for 76% of 1984's total Eurodollar transactions of $2.2 trillion. Earlier studies, made at the end of 1981, showed that interbank deposits as a proportion of total foreign currency deposits stood at 76% in London. And the figure was almost the same for the Asian dollar market in Singapore: 77%. (The composition of the IMM Eurodollar Futures Market as of December 31, 1984 is also of interest—see below.)

In both centers, the maturity mix of assets and liabilities was almost identical, according to the Federal Reserve Bank of San Francisco. This mix favored short maturities, as is to be expected in a market that can perhaps be viewed in some respects as similar to America's domestic federal funds market, where banks borrow and lend to each other as their cash positions—and reserve needs—ebb and flow.

A maturity analysis of the London market—both bank and non-bank—shows that in December 1981, some 42.9% of all Eurodollar liabilities were of one month or less in maturity. One month to three months accounted for 28.9%; over three months to one year, 24.5%; one year to three years, 2.3%; and three years and over, 1.6%. Eurodollar claims were ranked in almost the same order: less than one month, 31.2%; one to three months, 23.0%; three to twelve months, 21.8%; and one to three years, 7.4%. But borrowers had a definite preference for long-maturity debt: three years and over accounted for a whopping 16.6% of the total.

A further breakdown by banks and non-banks offers some interesting insight into who uses the market, and for what purpose. Banks were fairly evenly matched in maturity of credits and liabilities in almost all categories, suggesting that Eurocurrency banks tend to use the markets for trading,

Eurodollars (3-month)—International Monetary Market

Commitments of Traders in all Futures Combined and Indicated Futures, December 31, 1984

FUTURES	Total	Reportable Positions								Nonreportable Positions	
		Non-commercial				Commercial		Total			
	Open Interest	Long or Short Only		Long and Short (Spreading)							
		Long	Short	Long	Short	Long	Short	Long	Short	Long	Short
		(Contracts of $1,000,000 Face Value)									
All	85,128	5,884	6,347	4,718	4,718	59,658	54,831	70,260	65,896	14,868	19,232
Old	80,635	5,884	6,862	3,237	3,237	57,470	51,949	66,591	62,048	14,044	18,587
Other	4,493	615	100	866	866	2,188	2,882	3,669	3,848	824	645
		Changes in Commitments from November 30, 1984									
All	−11,056	Changes were not calculated because of the raising of the reporting level from 50 contracts to 100 contracts effective December 5, 1984.									
		Percent of Open Interest Represented by Each Category of Traders									
All	100.0%	6.9	7.5	5.5	5.5	70.1	64.4	82.5	77.4	17.5	22.6
Old	100.0%	7.3	8.5	4.0	4.0	71.3	64.4	82.6	76.9	17.4	23.1
Other	100.0%	13.7	2.2	19.3	19.3	48.7	64.1	81.7	85.6	18.3	14.4
	Number of Traders	Number of Traders in Each Category									
All	143	13	16	6	6	68	74	85	93		
Old	142	13	15	5	5	68	73	84	91		
Other	14	3	1	2	2	3	8	6	11		

Concentration Ratios

Percent of Open Interest Held by the Indicated Number of Largest Traders

	By Gross Position				By Net Position			
	4 or Less Traders		8 or Less Traders		4 or Less Traders		8 or Less Traders	
	Long	Short	Long	Short	Long	Short	Long	Short
All	27.0	36.4	38.5	45.1	12.1	19.5	20.1	26.2
Old	26.2	35.7	37.8	44.6	12.8	21.0	21.2	27.1
Other	74.4	53.3	81.7	76.0	34.2	27.9	38.0	42.0

Source: Commodity Futures Trading Commission hedging and arbitrage. Of course, individual institutions might well be borrowing short-term Eurodollars to fund longer term loans; but at the same time, other banks with surplus funds are using the Euromarkets as a vehicle for short-term investment. These flows apparently tend to balance each other out, leaving banks as a group in a net position of equilibrium.

Non-bank users of the Euromarkets cover a wide range of bank customers, from rich individuals who wish to deposit their money in a higher-yielding investment, to corporations wanting to fund new buildings or hedge a currency exposure, to countries who need long-term loans to fund their balance of payments deficits. These countries tend to be either the poorer, third world, or developing countries, or members of the Communist bloc. Agencies and quasi-government bodies, such as power utilities, from almost every Western nation also tap the Euromarkets. All have found a common ground.

Arbitrage

Of course, all the dollars in the Euromarkets originated at some time in America. The incentives for them to flow back and forth, as far as banks are concerned, are the interest rate differentials between domestic and Euro investments. Often banks will wait with bated breath for a little discrepancy, for rates to move just a little out of line, then pounce and take out the profit. Essentially they will buy the cheap one and sell the expensive one, then reverse the transaction when rates move back to their normal relationship. This is all part of the process of arbitrage.

An obvious opportunity of this sort arose in early 1979, when the second round of OPEC oil price rises caused a flood of Arab dollars to press rates downward in the Euromarket. "For the first time in nearly a decade U.S. banks faced a clear inward arbitrage incentive. The effective cost of Eurodollar funds was less than the cost of domestic funds, and U.S. banks quickly shifted from being net suppliers of funds to the Euromarket to being net takers. Between January and August 1979, U.S. banks reversed their net positions with their own foreign offices by nearly $30 billion," noted the Federal Reserve Bank of New York. They used the funds to make domestic loans to American companies.

Outward arbitrage is more common. This occurs when it is profitable for an American bank to raise funds in America through certificates of deposit—or more recently, from the public—and invest them in Eurodollars overseas. In the last couple of years slack loan demand during the U.S. recession has led to many regional and even small country banks depositing their excess funds in the Eurodollar market, using their correspondent banks as intermediaries.

Smaller, lesser-known banks have to enter the Euromarkets through an established member because it is essentially a closed club. Most transactions are handled by brokers who put borrowers and lenders together, and they know that everyone is nervous of a new "name" as a counterparty. Even the established "names" are ranked in several tiers according to their estimated creditworthiness; often "names" on a lower tier are unacceptable to the higher ranking banks. It all comes down to having confidence that the institution on the other end of the deal is sound and trustworthy.

The massive funding efforts by Continental Illinois shortly before its virtual collapse gave many players cause for concern, and many cut back the maximum amount of business they would do with the bank. Many took the opportunity to reassess their lists of acceptable "names," striking many off and thus shrinking the size of the overall market. After all, if one of the Top Ten American banks was in such poor condition, what about the other few hundred in the market? Even if funds are lent only overnight, a bank failure tomorrow morning (or worse still, on a different continent where the time difference makes it impossible to do anything about it) could still cause a substantial loss to a depositor. It can take many years to get money out of a failed institution.

Hedging with Eurodollars

Another major use of Eurodollars is for hedging. The Chicago Fed gave the following example (albeit in 1969. The principle still holds good, but the exchange rates will not be seen again for a considerable time, if ever). "A German importer wants to borrow funds to buy goods from a British exporter. He needs the equivalent of 1 million pounds for three months. To raise this amount, he can borrow German marks at his own bank at, say, 10% a year, and convert the marks into pounds at 9.6 marks per pound. After three months, he would repay the bank 9,840,000 marks (principal plus interest).

"Alternatively, he can borrow Eurodollars, again say, at 10%, and convert them into sterling at $2.39 to the pound. If at the maturity of the loan he can obtain dollars or marks at 4 marks per dollar, his total cost will be 9,799,000 marks (9,560,000 marks to purchase $2,390,000 for repayment of principal plus 239,000 marks to purchase $59,750 for payment of three months interest). This is 41,000 marks cheaper than if he had borrowed marks for exchange into pounds.

"The advantage exists, however, only as long as the borrower can be sure that when the loan matures he can purchase dollars with marks at 4 marks per dollar." To ensure against any drop in the exchange rate, he can buy dollars for 90 days forward in the foreign exchange market. In 1969, dollars for 90-day delivery were selling in the German foreign exchange market at a discount of about 7% a year—or about 3.930 marks per dollar. "At that rate the importer would have to pay 9,627,517 marks for $2,449,750 he needed to repay his Eurodollar loan. That would be 212,483 marks less than if he had borrowed marks instead of Eurodollars. Clearly it would be to his advantage to finance his imports in the Eurodollar market."

Hedging Interest Rate Risks

Banks, as well as importers and exporters, use the same kind of hedge. In addition, banks use Eurodollars to hedge themselves against the risk of interest rates rising once they have made a loan commitment. And in the same way, they utilize the Euromarkets as a means of pricing a loan to be drawn down at a later date.

Here's how it works. The mechanism is called a *swap;* that is, the bank swaps Eurodollar assets and liabilities of different maturities. Say a three month loan is to be made in three months time. What the bank does is to borrow six months Eurodollars now, and immediately lend them out again for three months. The second three months' money it reserves for its loan commitment, and because it borrowed it now, it knows what it will cost to fund that loan. Therefore it is able to price it in advance.

Swaps such as these are a very popular way to price a future commitment.

Another way a bank can hedge is by using Eurodollars to protect itself against the risk of falling interest rates by lengthening its maturities. It can do this by lending six months Eurodollars and borrowing three months—thus it would hope to fund the second three months at a lower rate, and make a bigger profit. Conversely, if it expected rates to rise it could borrow six months Eurodollars and lend them out for three months at the current rate, and in three months time, lend them out again at the new, higher rate.

LIBOR and IBOR

The idea of using Eurodollars for pricing brings us to a piece of Eurojargon that has made a significant impact on the way loans are priced in America—LIBOR, or the *London Interbank Offered Rate.* This is the interest rate asked on funds placed with premier banking institutions in London, and it can vary every day. Big borrowers have forced better and better terms from their banks, and one of these is the choice of paying interest at a rate that floats at a small premium to LIBOR.

LIBOR is often treated as the representative Eurodollar rate because London is the largest Eurodollar market. It reflects the price that banks trading there must pay for the funds with which they make loans.

In the last year or so a close relative—IBOR—has sprung up. This is the *Interbank Offered Rate,* and works much like LIBOR except that the benchmark rate is measured anywhere but London. Not usually Asia, because Eurodollar rates tend to be a little bit higher there (so any borrower would choose LIBOR instead), but often in New York. Yes, Eurodollars trade in New York as well. And Chicago.

However, the bits of America in which they trade are classed as overseas. The so-called "International Banking Facilities" were set up in late 1981 to make American banks more competitive in the Euromarkets; they bring tax savings and relief from reserve requirements, but also restrictions in that they allow banks only to take time deposits and make loans only to foreign customers. Much of their business initially was little more than a transfer of their Eurodollar books from such "offshore" centers as the Bahamas and Cayman Islands, but trading has since picked up. Until the advent of the IBFs, Eurocurrency trading had been stymied by American tax laws and reserve requirements on bank deposits.

Potential Problems of Eurodollar Markets

For all their advantages, Eurodollar markets have also brought a number of problems—or potential problems, many of which remain unsolved.

First, they instilled a fear that they must be dangerous because they are unregulated (which is not quite the same as unsupervised). As by definition they involved the currency of a country once it was beyond that country, it was immediately obvious that any regulation would have to be by international agreement. Despite lengthy talks, nothing has been done, and it looks as though nothing will be. However, most major countries have agreed they should keep an eye on the Euromarkets.

A second fear is that growth in the Euromarkets contributes to world inflation by effectively increasing the world's supply of credit—in other words, by creating money. It is true that once a deposit has left an American bank for the Euromarkets, it will be lent out and become another deposit. This second deposit will be free of reserve requirements, unlike the one in America. So the same reserve requirement would now be supporting double—and later triple and quadruple—the amount of credit as in America. But some theorists point out that all the intermediate lendings and borrowings are between banks, so the multiplication of real credit is not nearly so large as it first appears.

In any case, the Euromarkets have continued to grow while world inflation has declined—and for the moment at least, this particular fear has declined as well.

A last concern is of great importance to the banks involved. The problem with arbitraging, hedging and trading in Eurodollars is that every swap involves an asset, and every asset is recorded on the balance sheet. Heavy Euro activity can bloat the financial numbers significantly, and this is not considered a good thing as it generally lowers a bank's return on assets as well as weakening its capital ratios (specifically its capital to loan ratio). This is where the financial futures markets come to the fore.

Eurodollar Futures

A futures contract is an obligation to make or take delivery of a specified, standardized commodity at a set date in the future at a price decided today by open outcry on a recognized futures exchange, such as the Chicago Mercantile Exchange's International Monetary Market. In this case, Eurodollar futures are traded in $1 million lots for delivery in four months of the year—March, June, September and December. The contract specifies that the deliverable commodity is a 90-day time deposit—which to all intents and purposes means cash.

Having to go through delivery in futures can be avoided by an offset with an opposite transaction. For example, a bank that bought one Eurodollar futures contract can later sell another and have a net position of zero. This buying and selling is facilitated by the mechanism of the exchange's clearing house: because it essentially stands in as the buyer for every seller, and the seller for every buyer, it effectively guarantees each trade. Thus to sell a contract back, a buyer does not have to find the person he bought it from: the clearing house takes it. This has one further advantage in that traders do not have to assess the creditworthiness of the party on the other side of the trade, for it is always the clearing house.

Eurodollar futures were launched in December 1981, and caused a revolution in the futures industry in that they specified cash settlement. Earlier ideas of basing the futures on a deliverable debt instrument, such as a Eurodollar certificate of deposit, were abandoned due to the thinness of the cash market, and the difficulty in ensuring that there would be an adequate supply of deliverable grade paper to meet projected delivery requirements. But cash settlement caught on, and in just three years, Eurodollars now trade 6,000 to 10,000 contracts a day, worth $6 billion to $10 billion. Total volume for 1984 was 4.2 million, or $4.2 trillion. The concept has been exported, and Eurodollar futures also trade on the London International Financial Futures Exchange.

Advantages of Eurodollar Futures

It didn't take long for the Eurodollar experts to realize that futures could offer some very significant advantages over the cash market, not the least because they can be used to create a synthetic cash position. By buying and selling Eurodollar futures instead of actual deposits, banks can simulate the economic effects of swaps or hedges without tying up their credit lines with other banks. And more important, futures do not appear on the balance sheets as assets or liabilities—so they do not bloat an institution's footings.

Banks also like the speed with which they can enter the futures market, and the very public way in which prices are determined and broadcast to the world at large. Again, they do not have to worry about creditworthiness of the other party, or tiering of banks according to quality—they need only satisfy themselves of the soundness of the clearing house.

Another advantage of Eurodollar futures is their leverage. As Londoners would say, they are very highly geared. It takes only a small margin deposit to control a Eurodollar contract of $1 million, so a player gets, as it were, more bang for his buck than in the cash market. This can help a bank boost its return on assets. The leverage factor also has an adverse aspect in the event that the market moves against a position in futures. The difference between the daily settlement price for futures and the price at which the trade was initiated is figured daily, and when the initial margin deposit is depleted by a certain percentage a call for additional margin is issued by the brokerage firm to the customer. While this procedure keeps the futures position "marked to the market," it does have an impact on cash flow and bookkeeping.

"Ted" Spread

While banks and European money brokers account for a large proportion of the volume in Eurodollar futures, small local traders and brokerage houses get a look-in, too. One of their favorite games is to play the TED spread—the price difference arrived at by subtracting the price of Eurodollar futures from Treasury bill futures, which trade in an adjacent pit on the IMM. (The name TED is derived from the ticker symbols of T for T-bills and ED for Eurodollars). T-bill futures trade at a higher price than Euros, reflecting their lower yield. Whenever the spread is perceived to move out of line, arbitrage takes place—the traders buy the cheaper and sell the more expensive, and reverse the trade when the relationship returns to normal. This tends to drive away any aberrations in the spread.

The spread can be influenced by various factors, including the supply of Treasury bills. But it is also dependent on the estimated creditworthiness of banks: if their earnings are poor, for example, Eurodollar rates tend to rise, futures prices fall, and the spread widens out.

This arbitrage has one implication that is not generally realized: it has made Americans more aware of European interest rates, and as they try to profit from relative changes, they are strengthening the link between U.S. and foreign rates.

Some industry experts believe that futures can be improved upon. One such believer is the Philadelphia Board of Trade, set up by the Philadelphia Stock Exchange to launch options on cash Eurodollars in 1985. An option confers the right, but not the obligation, to make or take delivery of a contract at a future date at a price set today on the exchange. The Philly's option is of the European variety, meaning it can be exercised only on a specific date (in contrast, an American option can be exercised at any time prior to a set day).

Options allow an even wider variety of strategies to be developed than do plain futures. For example, a hedge with futures will lock in a result but at the same time excludes any chance of windfall profits should the situation move in the hedger's favor; an option will allow a choice of either, or both! Like having your cake and eating it, too. Futures contracts must be offset; an option can be put in a drawer and forgotten—it will just expire worthless.

Recognizing that options do indeed have advantages, the IMM itself introduced an options contract on its Eurodollar futures contract in 1985. As can be imagined, strategies at this point become rather complex.

Only time will tell how these futures and options will influence the cash markets. But if they repeat the history of Treasury bonds and T-bond futures, where the futures market has grown to three times the size of the cash market in the last nine years, they could become highly important.

SOYBEAN OIL AND ITS COMPETITION

BY WALTER L. EMERY

As we enter the last half of the eighties, soybean oil is faced with increasing competition from other edible fats and oils. The purpose of this study is to outline and place in perspective some of the shifting factors that influence the price of and demand for soybean oil.

A brief outline of the existing role of soybean oil in the world fats and oils picture should help in the understanding of unfolding developments which affect the soybean oil market.

- —Soybean oil is the most important edible oil in the world in terms of production, but it is now second to palm oil in world trade.
- —The United States is the world's largest producer and single consumer of soybean oil. Yet, the U.S. produces more soybean oil than it uses, so the excess must be exported or stored. In addition, foreign-produced soybean oil from imported U.S. and South American soybeans competes with U.S. soybean oil in the export market.
- —The oil content of soybeans is low compared to that of most other important oilseeds, whereas its protein content is relatively high. Thus the price of soybean oil is influenced significantly by changes in the demand for meal by high-protein consuming livestock and poultry, and by changes in world production of oilseeds having a higher oil content.
- —Demand for fats and oils is considered to be relatively price-inelastic in countries where per capita consumption of fats and oils is already near the "saturation point," but is considerably less so in developing countries where per capita use is low and responsive to income gains.
- —Most fats and oils are byproducts of commodities produced for other purposes, such as cotton; and their year-to-year supply is less dependent upon demand for fats and oils than it is for rapeseed, sunflowerseed, or soybeans.

Production and Trade

Soybean Oil

Soybean oil accounts by far for the largest share of world fats and oils production—about 23 percent; followed by palm oil, sunflowerseed oil, rapeseed oil, butter, lard, tallow and grease—each of which accounts for from 9 to 12 percent of total production.

The United States is the largest producer of soybean oil, with about 38 to 43 percent of the world total in recent years. The U.S. soybean oil marketing year runs from October through the following September. Brazil, whose oil marketing season is February/January, is the second largest producer, accounting for 16 to 20 percent of world soybean oil production. The European Community produces 12 to 15 percent, mostly from imported soybeans. Argentina, whose oil marketing season is April/March, now produces about 4 percent of the total; while Japan produces about 5 percent and Spain about 4 percent of world output—both virtually all from imported beans.

Because of the importance of U.S. soybean oil in the world fats and oils production picture, its price is influenced significantly by factors which affect U.S. soybean production. These factors include: (1) the perceived relative profitability to farmers of growing soybeans instead of corn in those areas where these two crops compete for acreage (a rough rule of thumb guide to a potential increase in soybean acreage is a price for soybeans about 2½ to 3 times the price of corn per bushel around planting time); (2) the relative profitability of growing soybeans instead of cotton in some Mississippi Delta areas; (3) weather developments affecting the harvest of winter wheat where soybeans are double-cropped with wheat (primarily Arkansas, Georgia and Missouri); (4) private and USDA estimates of soybean planting intentions and of actual plantings; (5) later weather developments during the critical flowering and pod setting and filling stages of plant growth (especially prolonged hot, dry weather); and (6) also at harvest time in such major soybean producing states as Iowa and Illinois. Soybean planting in the U.S. tends to be heaviest in May but can extend into late June or beyond if held up by adverse weather conditions. Moisture needs are greatest during the flowering and pod-setting and filling periods, which usually occur from late July to or beyond mid-August. The soybean marketing season is September/August, with most of the crop usually harvested in October.

Crop conditions in Southern Hemisphere countries, especially Brazil, are also important to U.S. soybean oil prices. Most of the crop concerns outlined above for U.S. soybeans apply also to Southern Hemisphere soybeans—but with the seasons reversed. Brazilian soybeans are planted, generally in November–December, in the major producing states of Rio Grande do Sul and Parana, with the critical flowering and pod setting and filling periods occurring in January–February and most of the harvest in March and April. The season in Argentina is close to a month later than in Brazil.

The Major Uses of Soybean Oil

The most important edible uses of soybean oil are for cooking and salad oil, shortening (baking and frying fats), and margarine. The United States accounts for about one-third of total world consumption of soybean oil, followed by Brazil with 11 to 12 percent, and the European Community (EC) with 10 to 13 percent.

In the United States, salad and cooking oil, shortening, and margarine account for about 97 percent of total edible fats and oils use. About 74 percent of all fats and oils used in edible products consists of soybean oil; salad and cooking oil—80 percent, about 4.7 billion pounds; shortening—67 percent, about 3.0 billion pounds; and margarine—85 percent, about 1.6 billion pounds.

Table 1
Soybean Oil: World Production, Trade and Consumption (1,000 Metric Tons)[1]

	1980/81	1981/82	1982/83	1983/84 Prelim.	1984/85 December
Production					
United States	5,112	4,980	5,462	4,932	5,071
Brazil	2,601	2,406	2,564	2,352	2,400
Argentina	158	219	346	489	575
E.C. 10	1,829	2,007	1,910	1,670	1,681
Mexico	270	265	261	350	360
Japan	626	633	681	704	710
Spain	484	544	538	488	472
China	412	484	434	450	463
Taiwan	147	172	184	181	196
Soviet Union	297	282	236	225	260
Eastern Europe	186	165	226	220	217
Other	741	829	946	965	1,039
TOTAL	12,863	12,986	13,788	13,026	13,444
Exports					
United States	740	942	918	823	680
Brazil	1,153	852	1,020	987	950
Argentina	64	120	274	375	475
E.C. 10	865	948	946	895	924
Portugal	18	57	36	70	70
Spain	411	478	420	450	410
Other	92	103	126	109	101
TOTAL	3,343	3,500	3,740	3,709	3,610
Imports					
E.C. 10	456	522	519	532	542
Mexico	25	80	26	67	50
Brazil	3	12	10	54	100
India	639	460	537	750	550
Pakistan	219	304	310	350	330
China	73	31	10	0	5
Soviet Union	112	192	191	75	100
Eastern Europe	238	170	270	146	195
Mid-East/N. Afr.	735	790	774	683	792
Other Latin America	457	476	513	445	435
Other	428	498	546	476	525
TOTAL	3,385	3,535	3,706	3,578	3,624
Consumption					
United States	4,134	4,325	4,472	4,354	4,400
Brazil	1,534	1,542	1,612	1,519	1,550
Argentina	76	84	72	80	85
Other Latin America	520	580	619	588	579
E.C. 10	1,477	1,596	1,493	1,364	1,296
Mexico	320	324	290	390	410
Japan	632	686	687	706	715
Spain	105	100	90	75	60
China	485	515	444	450	468
Taiwan	143	176	187	189	190
Soviet Union	409	474	427	300	360
Eastern Europe	422	334	494	365	412
India	708	533	613	740	767
Pakistan	224	310	314	345	335
Mid-East/N. Afr.	862	894	906	848	987
Other	765	816	961	914	981
TOTAL	12,816	13,289	13,681	13,227	13,595

Table 1 (Continued)
Soybean Oil: World Production, Trade and Consumption (1,000 Metric Tons)[1]

	1980/81	1981/82	1982/83	1983/84 Prelim.	1984/85 December
Ending Stocks[2]					
United States	787	500	572	327	318
Brazil	285	309	251	151	151
Argentina	32	47	47	81	96
E.C. 10	196	181	171	114	117
Spain	60	27	55	18	20
Other	344	372	413	486	338
TOTAL	1,704	1,436	1,509	1,177	1,040

[1] Trade, consumption and stocks data are aggregated using individual marketing years, except for Argentina and Brazil which are converted to an October–September basis. For northern hemisphere countries, marketing years begin in the first year shown, and southern hemisphere countries begin in the second year.
[2] Stocks data are not estimated for all countries.
Source: Counselor and Attache reports, official statistics, USDA estimates
Foreign Agricultural Service Oilseeds and Products

U.S. Exports

Exports of U.S. soybean oil usually account for a relatively small percentage of production, but because they are less predictable than domestic use, they tend to exert an influence on prices which is greater than suggested by their share of the total market. Inasmuch as the U.S. produces more soybean oil than it consumes and must export or store the excess, the disposition of surplus production influences soybean oil prices. It should be recognized that, at times within a given season, production of soybean oil may be exceeded by combined domestic disappearance and exports for one or more months. (Exports alone have accounted for as much as 35 percent of one month's production.) However, for a complete season the amount of U.S. soybean oil excess to domestic requirements and available for export or ending stocks has ranged between 1.150 million and 1.769 million metric tons (tonnes) (2.5 and 3.9 billion pounds) in the 1979/80–1983/84 marketing seasons. Exports during the same period ranged between 740 thousand and 1.220 million tonnes (1.6 to 2.7 billion pounds) representing only 14 to 22 percent of the season's production and 15 to 23 percent of total disappearance (domestic disappearance plus exports). End-of-season stocks (carryover) in the 1979/80–1983/84 seasons ranged between 327 and 787 thousand tonnes (721 and 1,735 million pounds). Ending stocks in this period represented from 6 to 16 percent of total disappearance.

Factors Affecting U.S. Soybean Oil Exports

The amount of U.S. soybean oil available for export is influenced by a number of considerations. There are times during a season when the soybean crush rate is sufficiently high, because of demand for meal, to produce more soybean oil than needed for routine domestic demand and outstanding export commitments for nearby shipment, and this situation can exert downward pressure on soybean oil prices. As noted elsewhere, the oil content of soybeans is much lower than the protein content. Thus, if the demand for meal (which is less storable than oil) is high, more oil may be produced than needed at the time. Yet, there are also times when unsatisfactory soybean crushing margins prompt some cutback in the crushing rate, which can be a supporting influence for soybean oil prices. But, a reduced crushing rate is often associated with softening prices for soybean meal or oil and, as such, tends to only cushion declining oil prices rather than foster price firmness.

The share of the U.S. soybean oil supply available for export can also be affected by changes in the availability and prices of competing fats and oils in the United States, such as cottonseed oil, lard, and edible tallow. Competition from foreign-produced soybean oil as well as from other edible fats and oils also affects U.S. soybean oil exports. In this connection, it should be recognized that the U.S. tends to be a residual supplier of soybean oil to the world market, with a significant portion of U.S. exports moving with the aid of government programs. For example, in the 1982/83 season, out of total soybean oil exports of 914.8 thousand tonnes, 67 percent moved under government programs (P.L.480-Title I, 163.2 thousand tonnes and Title II, 107.9 thousand; 344.7 thousand tonnes under CCC GSM-102 Credit Assurance and GSM-102/GSM-5 Blended Credit Program). Thus, the importance of U.S. government program aid to soybean oil exports and price cannot be overemphasized, and developments in this area must be monitored closely. Also, as demonstrated in 1983/84, a strong dollar can inhibit U.S. soybean oil exports.

Soybean oil produced abroad from soybeans imported mainly from the U.S. provides considerable competition for U.S. soybean oil in the export market. The European Community (EC) is the major U.S. customer for soybeans, which are crushed primarily to obtain protein meal for its livestock and poultry population. The excess soybean oil is exported in competition with U.S. soybean oil (the EC in recent years has exported more soybean oil than the U.S.). Hence, the larger the U.S. or Southern Hemisphere exports of soybeans (to Western Europe in particular), the greater the potential competition for U.S. soybean oil exports. Conversely, reduced Western European demand for protein meal, whether supplied by the crushing of U.S. or Southern Hemisphere soybeans, lessens soybean oil export competition from that quarter.

In addition, soybean oil exports from the Southern Hemisphere producers affect foreign demand for U.S. soybean oil. The extent of export competition from Southern Hemisphere producers is influenced not only by the amount of soybeans produced and

Table 2
World Soyoil Imports, Major Importers and Regions

Crop Year[1]	European Community	India	Pakistan	Other Developed Countries	Other Developing Countries	Centrally Planned Countries	World
			1,000 metric tons				
1977/78	438	511	206	181	997	275	2,608
1978/79	449	553	277	186	1,117	236	2,818
1979/80	492	643	220	192	1,172	349	3,068
1980/81	476	595	265	193	1,342	322	3,193
1981/82	521	419	315	209	1,495	395	3,354
1982/83	509	399	241	185	1,602	505	3,441

Table 3
World Soyoil Exports, Major Exporters and Regions

Crop Year[1]	United States	Brazil and Argentina	European Community	Spain	Other Developed Countries	Other Developing Countries	Centrally Planned Countries	World
				1,000 metric tons				
1977/78	933	581	842	272	13	8	4	2,653
1978/79	1,059	561	929	311	33	13	13	2,919
1979/80	1,220	1,023	897	370	68	36	1	3,615
1980/81	740	1,232	886	411	68	30	0	3,367
1981/82	942	1,079	960	478	88	37	0	3,584
1982/83	918	1,190	940	420	81	46	0	3,595

[1] Based on aggregate of differing local marketing years.

Sources: U.S. Department of Agriculture and Food and Agriculture Organization of the United Nations.

Table 4
United States: Soybean Oil Supply/Utilization Local Marketing Year (Oct–Sep) (1,000 MT)

	Prod	Exports	Domestic Cons	Ending Stocks
1975/76(76)	4638	443	3612	567
1976/77(77)	3891	702	3406	350
1977/78(78)	4666	933	3752	331
1978/79(79)	5136	1059	4056	352
1979/80(80)	5491	1220	4074	549
1980/81(81)	5112	740	4134	787
1981/82(82)	4980	942	4325	500
1982/83(83)	5462	918	4472	572
1983/84(84)	4932	823	4354	327
1984/84(85)	5071	680	4400	318

Table 5
Brazil: Soybean Oil Supply/Utilization Local Marketing Year (Feb–Jan) (1,000 MT)

1976/77(76)	1180	430	800	100
1977/78(77)	1585	560	1025	100
1978/79(78)	1629	522	1110	97
1979/80(79)	1669	459	1309	121
1980/81(80)	2463	809	1516	262
1981/82(81)	2585	1212	1490	145
1982/83(82)	2392	873	1505	181
1983/84(83)	2403	947	1575	110
1984/85(84)	2375	900	1525	160
1985/86(85)	2431	950	1550	141

Table 6
Argentina: Soybean Oil Supply/Utilization Local Marketing Year (Apr–Mar) (1,000 MT)

1976/77(76)	81	67	18	4
1977/78(77)	96	64	33	3
1978/79(78)	112	59	52	4
1979/80(79)	106	102	4	4
1980/81(80)	121	88	25	12
1981/82(81)	183	84	103	8
1982/83(82)	312	220	82	18
1983/84(83)	390	298	70	40
1984/85(84)	495	415	75	45
1985/86(85)	610	530	77	43

Source: Foreign Agricultural Service Oilseeds and Products

crushed, but also by government export policies with respect to the soybean complex. For example, at one time or another, the Brazilian government has briefly suspended export registrations for soybeans and soybean products, providing at least a temporary lift to prices. The Brazilian government, through CACEX, the export arm of the Bank of Brazil, has at times stated its export goals for soybean oil, meal, and soybeans for a given season. Export sales for new crop oil are, at times, made in some volume before the size of the new soybean crop is established. In some seasons, when production failed to meet expectations, Brazilian exporters have had to buy back export contracts or import soybean oil to fulfill export commitments, with resultant upward pressure on prices. Brazil, whose annual crushing capacity of about 25 million tonnes exceeds annual production by a considerable margin, has used selected policies to encourage exports of soybean oil and meal. A drawback system provides favorable financing to import soybeans for domestic processing and re-export as oil and meal. Differential taxes levied by the individual states (soybeans-13 percent; soybean meal-11 percent; and soybean oil-8 percent, in late 1984) favor the export of products over soybeans. Registration requirements imposed by CACEX have, at times, restricted the export of soybean oil to prevent domestic oil prices from rising too fast. Brazil is a major competitor of U.S. soybean oil in the export market, accounting for more than 25 percent of world exports in recent years. Argentina, a small but growing factor in the export market, has also used a differential tax program to encourage the export of soybean oil and meal instead of soybeans.

U.S. exports of soybean oil are also influenced by the availability and relative prices of other edible fats and oils. The major competitor, and one which because of comparatively low associated costs of production appears to offer the most significant threat for U.S. soybean oil exports to traditional U.S. markets, is palm oil—which is now the most important edible oil in international trade—accounting for about 29 percent of total world exports of fats and oils compared with 27 percent for soybean oil, and 11 percent for sunflowerseed oil in recent seasons. In this respect, it should be noted that developing countries are the primary importers of soybean oil and that the Asian market has traditionally been the most important U.S. soybean oil export market. This is an area where freight considerations favor palm oil over U.S. soybean oil. It should also be noted that the Asian region is the world's largest exporter of vegetable oils.

Table 7
World Production: Fats-Oils[1] (In 1,000 Metric Tons)

	1980/81	1981/82	1982/83	1983/84 Prelim.	1984/85 December
Edible Vegetables:					
Soybean	12,863	12,986	13,788	13,026	13,444
Cottonseed	3,219	3,465	3,366	3,333	3,983
Peanut	2,735	3,498	2,965	3,207	3,392
Sunflowerseed	4,741	5,152	5,798	5,628	6,078
Rapeseed	4,051	4,593	5,267	5,135	5,284
Olive	1,921	1,618	1,500	1,817	1,764
Coconut	2,895	2,865	2,679	2,404	2,746
Palm Kernel	598	724	762	820	863
Palm	5,168	6,003	5,623	6,235	6,847
TOTAL	38,191	40,904	41,748	41,605	44,401
Industrial:					
Linseed	685	627	662	721	681
TOTAL	685	627	662	721	681
Marine Oils:					
Fish	1,149	1,313	1,122	1,238	1,276
TOTAL	1,149	1,313	1,122	1,238	1,276
Animal Fats:					
Butter (Product Weight)	6,066	6,365	6,826	6,712	6,599
Tallow & Grease	6,355	6,241	6,372	6,432	6,402
TOTAL	12,421	12,606	13,198	13,144	13,001
TOTAL (Fats & Oils)	52,446	55,450	56,730	56,708	59,359

[1] Split year includes northern hemisphere crops harvested in the late months of the first year shown combined with southern hemisphere and certain northern hemisphere crops harvested in the early months the following year. For Soybeans, Soybean Meal, and Soybean Oil, Argentina and Brazil have been converted to an October–September basis. Animal, marine, and palm products are calendar year estimates for the second year shown.
Sources: Counselor and Attache Reports, Official Statistics, USDA Estimates; Foreign Agricultural Service Oilseeds and Products

Competing Oils and Fats

Palm Oil

The oil palm produces both palm oil (from the pulp of the fruit) and palm kernel oil (from the nut or kernel). However, palm oil accounts for the bulk of production and, as noted later, palm kernel oil competes more directly with coconut oil in its use than with soybean oil. The palm fruit ripens in about 6 months and must be gathered immediately and processed to avoid spoilage. Although some fruit is harvested every month, there are usually two production peaks. It takes about 4 years from planting of the oil palm to production of oil, with peak production occurring after 10 years. Generally, 2 years of increasing yields are followed by one year of either little change or a decline in yield, depending largely upon weather conditions during the 6 to 36 months preceding the harvest. Introduction of the Cameroon Weevil in Malaysia to enhance pollination and fruit set is credited with having stimulated both palm oil and palm kernel oil production considerably, but sharply reduced yields followed for close to two years due primarily to weevil stress.

An important competitive advantage of West Malaysian palm oil is its high yield per acre, estimated around 3,100 pounds of palm oil and 375 pounds of palm kernel oil per acre. This yield per acre compares with an estimated 739 pounds of peanuts per acre in the U.S., 526 pounds of sunflowerseed oil in the USSR and only about 290 pounds of soybean oil per acre in the U.S., on average.

One important consideration in the evaluation of potential competition for soybean oil from palm oil is the amount of rainfall in West Malaysia. A period of drought affects oil production about 10 months later. In addition, floods can delay harvesting or movement of palm fruit, with resultant upward pressure on palm oil prices. Seasonally, Malaysian palm oil production is considerably heavier in the July–December period than in January–June. (Normally, Malaysian palm oil production reaches a seasonal low in February, which influences a usual seasonal peak in prices in March.)

Malaysia, primarily West Malaysia, accounts for as much as 58 percent of world palm oil production, followed by Indonesia—with about 18 percent. Nigeria, the Ivory Coast and Zaire account for lesser percentages of world production. Malaysia accounts for about 76 percent of world palm oil exports. India is by far the world's largest importer of palm oil, followed by Pakistan. These two countries combined have accounted for an estimated 25 to 33 percent of the world total in recent years. Other major importers include the USSR, Netherlands, Japan and the U.S.

Sunflowerseed Oil

Sunflowerseed oil production ranks second only to palm oil among the competitors of soybean oil in world edible oil production. The USSR, whose sunflowerseed marketing season runs from October through the following September, is by far the most important producer, and accounts for 31 to as much as 46 percent of world sunflowerseed oil production. Most of the Soviet crop is grown in the Ukraine and the RSFR (Russian Soviet Federated Socialist Republic). Much of the crop is usually planted by early May and harvested in September/October. In the USSR, a good sunflowerseed crop is likely only if plantings are early and there is timely and above average rainfall during the growing period. *Sukhoveys*, the hot, dry winds from Central Asia, can hit the crop when its moisture needs are high during the flowering period and reduce yields sharply. Late plantings because of wet spring weather; a cold, wet summer; or wet harvest can spell lower yields and reduced harvested acreage. High moisture sunflowerseed reduces the amount available for crushing.

Argentina is the world's second largest producer of sunflowerseed oil (accounting for about 14 percent). Much of its sunflowerseed is planted on land just harvested for wheat. The major producing areas are in the central Pampa (the wide semi-circle around Buenos Aires), particularly in southern and western Buenos Aires Province and southern Santa Fe Province. Sunflowerseed in this Southern Hemisphere country is planted between September and December or January, and harvested mostly from March to June. In Argentina, sunflowerseed acreage and production is influenced by the amount of acreage previously planted to wheat—with which sunflowerseed is double-cropped. The amount of acreage planted to sunflowerseed is also influenced by relative market and support prices for corn and sorghum—which are planted and harvested around the same time as sunflowerseed.

China, Romania, and the United States, each account for about 5 to 6 percent of world sunflowerseed oil production. Argentina has become the world's largest exporter of sunflowerseed oil, accounting for as much as 37 to 46 percent of the world total. The EC accounts for about 21 to 25 percent of world exports, and both the U.S. and Eastern Europe have been important exporters at times. France and Algeria are important importers, and Cuba has become a sunflowerseed oil importer of some significance.

Rapeseed Oil

Rapeseed oil accounts for about 12 percent of world production of major vegetable oils, but its production has increased sharply in recent years and it promises to become an increasingly important competitor of soybean oil. World rapeseed oil production has ranged from an estimated 4.1 to 5.3 million tonnes in the 1979/80 to 1983/84 period. West Germany, Canada and France are the major exporters of rapeseed oil. The major importers are Nigeria and Algeria. India, at times, has been a significant importer of rapeseed oil.

China, whose rapeseed harvest occurs in June–August, is by far the world's largest producer of rapeseed oil; followed by India, whose major harvest takes place in the February–April period. Together, these two countries account for about one-half of world production. However, usually all of the rapeseed produced in these two countries is used domestically. Harvested acreage in India has varied much less than production, with timely rains during the monsoon season a major factor influencing crop size. Harvested acreage and production has varied considerably in both China and Canada.

Canada, whose rapeseed crop is usually planted in May and concentrated in north central Alberta and Saskatchewan, and in southern Manitoba, accounts for 8 to 10 percent of world rapeseed oil production. The bulk of Canada's harvest is in the August–October period. Although rapeseed is considered a cool season crop, it must be planted early in Canada to reduce vulnerability to early fall frosts which can significantly reduce yields and quality. A heavy frost in late spring can kill young plants, and reseeding usually results in reduced yields. Rapeseed is also less tolerant of drought than wheat. The *Statistics Canada* Intended Acreage report, released in early April, provides a guide to plantings. Price relationships with barley—a competing crop for acreage—can also influence plantings considerably.

Canadian low erucic acid rapeseed oil (Canola) and partially hydrogenated low erucic acid rapeseed oil obtained a "generally-regarded-as-safe" for use as fats and oils and food status by the U.S. Food & Drug Administration in early 1985. This development paved the way for eventual increasing competition from rapeseed oil in the U.S. domestic market and probably also in the export market.

Coconut Oil

Coconut oil represents about 6 to 7 percent of total world edible vegetable oil production, ranging be-

Table 8
Major Vegetable and Marine Oils: World Supply and Utilization

Item	1979/80	1980/81	1981/82	1982/83	1983/84[1]
		1,000 metric tons			
Production:					
Soybean	13,443	12,871	13,071	13,648	13,147
Palm	4,829	5,170	6,006	5,609	6,305
Sunflowerseed	5,015	4,734	5,141	5,800	5,507
Rapeseed	3,357	4,042	4,605	5,349	5,251
Cottonseed	3,156	3,228	3,467	3,339	3,383
Peanut	3,058	2,839	3,608	3,172	3,327
Coconut	2,659	2,904	2,876	2,659	2,517
Olive	1,599	1,921	1,252	1,907	1,429
Fish	1,208	1,149	1,313	1,142	1,117
Palm kernel	590	598	728	772	820
Linseed	728	685	627	689	731
Total	39,642	40,141	42,694	44,086	43,534
Exports:					
Soybean	3,529	3,422	3,621	3,724	3,637
Palm	3,723	3,416	3,926	3,968	3,968
Sunflowerseed	1,088	1,175	1,177	1,525	1,488
Rapeseed	643	824	822	832	960
Cottonseed	416	441	532	385	268
Peanut	459	265	374	365	273
Coconut	1,204	1,341	1,246	1,307	1,128
Olive	283	267	219	346	292
Fish	782	820	788	785	749
Palm kernel	369	383	449	477	501
Linseed	374	272	252	282	289
Total	12,870	12,626	13,406	13,996	13,553
Imports:					
Soybean	3,069	3,305	3,460	3,678	3,463
Palm	3,345	3,155	3,653	3,911	3,621
Sunflowerseed	893	1,091	1,128	1,451	1,546
Rapeseed	634	733	734	835	958
Cottonseed	451	449	447	343	290
Peanut	490	334	367	437	314
Coconut	1,121	1,404	1,255	1,234	1,169
Olive	266	260	357	400	288
Fish	778	712	781	709	694
Palm kernel	396	377	478	516	487
Linseed	294	276	233	218	218
Total	11,737	12,096	12,893	13,732	13,048
Consumption:					
Soybean	12,518	12,705	13,196	13,572	13,313
Palm	4,432	4,927	5,469	5,947	5,929
Sunflowerseed	4,697	4,609	5,166	5,664	5,670
Rapeseed	3,350	3,963	4,517	5,344	5,234
Cottonseed	3,154	3,254	3,370	3,314	3,439
Peanut	3,104	2,931	3,595	3,252	3,378
Coconut	2,591	3,003	2,900	2,614	2,620
Olive	1,659	1,663	1,584	1,676	1,710
Fish	1,068	1,112	1,262	1,079	1,112
Palm kernel	607	606	749	822	797
Linseed	670	678	609	628	656
Total	37,850	39,451	42,427	43,923	43,858

Note: Trade and consumption data are aggregated using individual marketing years.

[1] Preliminary.

Source: Foreign Agricultural Service.

tween an estimated 2.4 and 2.9 million tonnes in the 1978–83 period. The Philippines is by far the most important exporter, and has accounted for over 40 percent of total production in recent years; followed by Indonesia, with about 25 percent. However, Indonesia consumes virtually all of its production domestically. The U.S. is the world's largest importer of coconut oil, mostly for inedible purposes.

Coconut palms begin to bear nuts in the 6th or 7th year after planting and produce in quantity at 10 to 12 years of age. The nuts ripen in 9 to 12 months and may be harvested several times during a year. Copra is the dried meat of the coconut from which oil is obtained. Efforts to replace the aging tree population have met with limited success because of the reluctance of smallholders, who account for most of the production, to destroy their old trees to make way for new plantings.

The amount of rainfall in the major producing areas can exert a significant influence on coconut oil production. In the Philippines, rainfall in a given 6-month period affects the exports of coconut oil about 14 or 15 months later. The important typhoon months (October and November) play an important role in this respect. The effects of a drought tend to persist for as much as a year following the return of normal rainfall.

Competing Byproduct Fats and Oils

The foregoing crops; soybeans, sunflowerseed, and rapeseed are produced for their oil and meal—and their annual production is rather directly related to actual or prospective demand for edible oil and meal—considering the relative oil/meal content of each of these crops. Oil palms are grown for their palm oil and palm kernel oil, and the coconut palm for coconut oil. The proportion of the annual crops which is harvested and processed from producing trees is affected by the level of edible oil prices.

Production of the following important group of fats and oils depends primarily on the demand for products other than fats and oils and meal. This group includes: butter, cottonseed oil, lard, tallow and grease. Their production depends on the demand and price outlook for milk, cotton, and meat, respectively. Yet their availability, and factors which affect their availability, can exert a significant influence on the demand for and price of soybean oil.

The combined annual estimated world production of this group amounts to more than one-third of world total fats and oils production. Butter production in recent years has accounted for about 6.1 to 7.0 million tonnes. The USSR is by far the world's largest producer of butter, but it is also an importer. Butter tends to compete with soybean oil primarily when butter's use is subsidized.

World production of edible and inedible tallow and grease has amounted to a rather steady 6.1 to 6.4 million tonnes in recent years. It is difficult to determine to what extent tallow is used for edible purposes worldwide, and thus as a substitute for soybean oil. Edible tallow is primarily a byproduct of the commercial beef industry, and in the United States it does compete with soybean oil on a price basis for use in some processed foods and for direct use as a frying fat in the "fast food" segment of the restaurant industry. (Inedible tallow and grease are major raw materials for fatty acids and are used extensively in animal feeds and in lubricants.) The U.S. is the world's largest producer of edible and inedible tallow and grease (accounting for about 50 percent of the 5.2 to 6.3 million tonnes produced annually in recent years. The U.S. also accounts for more than 50 percent of the 2.2 to 2.6 million tonnes of world tallow and grease exports annually.

World lard production in recent years has ranged between 3.9 and 4.5 million tonnes. China is normally the largest producer but it consumes its production domestically. Its production is nearly equalled by the USSR which consumes most of its output but is also an exporter of lard. The U.S. and West Germany are the next largest producers of lard. West Germany is the most important exporter of lard, but the U.S. is also a major exporter.

Cottonseed oil ranks among the major edible oils, with world production of 3.1 to 3.9 million tonnes annually. China is now believed to be the world's largest producer of cottonseed oil, followed by the USSR, but neither country is considered a factor of significance in the world market for cottonseed oil. The United States accounts for about 15 to 20 percent of world production and usually more than 75 percent of world exports of cottonseed oil. Brazil is the second largest exporter of cottonseed oil. Major importers are Egypt, Venezuela, and Japan. Over 50 percent of the U.S. annual cotton oil production and about 40 percent of Brazilian production is exported.

How Oil Content Affects Prices

The oil content of the soybean is a relatively low 18 percent compared to its protein content which is close to 80 percent. Its oil content tends to increase, and protein content decrease, as soybeans are grown in progressively warmer climates. In comparison, the average oil content of the sunflowerseed is about 42 percent and rapeseed about 41 percent. Of the major oilseeds, only cottonseed contains as little oil as soybeans. The average yield of oil per bushel of soybeans in the U.S. has ranged between 10.3 and 11.3 pounds on a monthly basis over the past couple of seasons, and because of the drought, oil yield was relatively low in the early part of the 1983/84 season. Meal yield in the same period ranged from 46.4 to 48.3 pounds per bushel. Soybean oil accounted for 29 to 37 percent of combined product value on a monthly basis for the combined 1981/82 and 1982/83 seasons, and 37 to 50 percent in 1983/84. Meal accounted for 63 to 71 percent of total value in the same period, but only 50 to 63 percent in 1983/84.

It is apparent from the above considerations that the soybean crushing rate (production of oil and meal) is generally geared to the demand for meal (which must be met mostly from current production primarily because meal is stored for a shorter period than oil, and meal stocks usually represent a relatively small share of a given month's meal disappearance). Thus, the actual and prospective demand for meal plays a major role in the determination of soybean oil prices. As indicated previously, strong demand for meal can lead to a higher crushing rate and resultant larger production of oil than can be readily absorbed without price concessions. Demand for meal, of course, is affected by the amount of high-protein consuming animal units (particularly hogs and poultry), and also by livestock and poultry feed-price relationships, and the price of soybean meal compared to other acceptable protein substitutes.

A change in the production of a low oil-content oilseed, such as soybeans, from one season to the next exerts less influence on total world edible oil production than a change in a high oil-content oilseed crop. For example, a 20 percent reduction in the 1980/81 season's U.S. soybean production translated into a reduction of only 7 percent in U.S. production of soybean oil in that season (partly because a larger than usual percentage of the crop was crushed that season). In comparison, a 20 percent reduction in Soviet sunflowerseed that season resulted in a drop of 15 percent in Soviet sunflowerseed oil production in the same season.

The oil content of oilseed crops can vary to some degree from one season to another, depending largely upon the occurrence of drought, and this can exert some influence on edible oil supply and price for that crop relative to earlier expectations. The oil content of most oilseeds whose oil competes with U.S. soybean oil in the world market is relatively high. The acreage devoted to their production each season is dependent to some degree upon the general level or trend of fats and oils prices. In turn, changes in their production can exert an impact on edible fats and oils prices in general, and on soybean oil in particular.

Demand for Fats and Oils

Demand for food fats and oils, including soybean oil, is considered to be relatively price inelastic in the developed, industrialized countries of the world, but less so in the developing countries where per capita fats and oils consumption is low and tends to increase with rising income. The most promising areas for U.S. soybean oil exports are those countries in Asia which have been at one time or another large importers of U.S. soybean oil, such as Pakistan, Bangladesh and India; and such Central American and South American countries as Mexico, the Dominican Republic, Ecuador, Colombia, Peru, and Venezuela.

Prospects for increasing fats and oils consumption in the major industrialized countries appear to be limited primarily to population growth and income. Fats and oils demand in industrialized countries has been reduced during recessionary periods, nonetheless.

Per capita consumption of fats and oils in the United States has averaged 51.6 pounds in recent years. This compares with per capita consumption of 12.2 pounds in India, 18.5 pounds in Pakistan, and 14.3 pounds in Bangladesh. Per capita consumption is around 26 pounds in many Latin American countries. While the potential is significant for increasing per capita use of fats and oils in most developing countries, effective demand is another matter, being dependent not only on the state of economic growth in such countries, but also on the amount of foreign aid and foreign exchange available for the importation of edible oils. The extent to which U.S. soybean oil can participate in any significant expansion in demand depends partly on the availability of cheaper substitutes. On this score, palm oil, sunflowerseed oil and rapeseed oil appear to be supplying an increasing share of import needs, at the expense of soybean oil.

Competing Fats and Oils in Major Edible Oil Uses

Although soybean oil is the world's most important edible oil in terms of production, its demand and price are influenced by the availability of competing fats and oils worldwide. The major edible uses of soybean oil are as cooking and salad oil, shortening (baking and frying fats), and margarine.

In general, regional consumption patterns for fats and oils correspond to regional patterns of fats and oils production. For example, in East Asia, palm oil and coconut oil are dominant in the fats (energy) portion of diets, whereas in the USSR sunflowerseed oil and cottonseed oil play a dominant role. In addition to regional patterns of fats and oils production, taste preferences, and trade restrictions by some countries on the importation or use of foreign-produced oils tend to limit substitutability of one oil for another. Nevertheless, aided by technological advances in fats and oils processing, there is significant interchangeability among the major fats and oils for edible use.

In the United States, salad and cooking oil, shortening, and margarine account for about 97 percent of total edible fats and oils use. Soybean oil is the leader by far, accounting for about 74 percent of all fats and oils used in edible products. Its domestically-produced oil competition consists primarily of cottonseed oil and corn oil. The major imported oils are palm oil, palm kernel, and coconut oil, which together account for around 6 percent of total use. The leading animal fats are edible tallow and lard, which account for around 8 percent of total use in edible oil products, but a significantly larger share when their direct use (by such users as fast food chains) is considered.

Some idea of the relative importance of the various fats and oils in major edible oil products may be illustrated by the table on page 25T. In 1983, soybean oil accounted for 81 percent (4.7 billion pounds) of the oils used in the production of salad and cooking oils, followed by cottonseed oil with about 7 percent.

While none of the other individual fats and oils offers any significant competition to soybean oil in the U.S. market, together they do account for about 33 percent of the fats and oils used in the manufacture of shortening compared with about 67 percent for soybean oil. The degree of competition presented depends primarily upon shifts in their availability and their price relative to soybean oil.

Conclusion

It is apparent from the foregoing comments that the price trend for soybean oil is influenced not only by its own supply/demand situation and prospects, but also by seemingly extraneous factors ranging from the amount of rainfall in Malaysia to hog and poultry numbers in Europe.

Developments concerning world oilseed production prospects must be monitored continuously. Factors to watch in the first quarter of a calendar year include weather conditions during the critical growth periods and harvest for Southern Hemisphere oilseed crops, and the U.S. planting intention report. Important market factors in the April–June quarter include actual production of oilseeds in the Southern Hemisphere, planting conditions in the Northern Hemi-

Table 9

Salad or Cooking Oils: Fats and Oils Used in Manufacture, U.S.

Year Beginning October 1	Soybean	Cottonseed	Corn	Peanut	Olive	Total[1]
			Million pounds			
1979	4,060	403	317	96	59	5,100
1980	4,042	460	350	148	58	5,167
1981	4,308	380	385	100	59	5,320
1982	4,383	416	352	136	64	5,450
1983[2]	4,680	415	403	157	71	5,775

Baking or Frying Fats: Fats and Oils Used in Manufacture, U.S.

Calendar Year	Soybean	Cottonseed	Coconut	Palm	Lard	Edible Tallow	Total[1]
			Million pounds				
1979	2,680	169	93	222	316	713	4,193
1980	2,651	189	103	88	378	684	4,193
1981	2,767	136	125	217	315	724	4,284
1982	2,948	158	139	190	251	679	4,365
1983[2]	2,914	139	152	213	277	632	4,327

Margarine: Fats and Oils Used in Manufacture, U.S.

Calendar Year	Soybean	Cottonseed	Corn	Animal Fats[3]	Edible Tallow	Total[1]
			Million pounds			
1979	1,643	25	222	86	11	1,985
1980	1,653	25	223	104	10	2,016
1981	1,685	25	214	78	8	2,012
1982	1,718	21	220	29		1,996
1983[2]	1,549	34	212	41		1,836

[1] Includes small quantities of other fats and oils. [2] Preliminary.
[3] Includes lard and edible tallow.
Source: USDA

sphere, and the late June USDA report on actual plantings of soybeans in the U.S. Weather developments in the July–September quarter are important during the critical growth period and early harvest of oilseeds in the Northern Hemisphere. And, in the final quarter of the calendar year, soybean oil prices can be influenced by earlier-than-normal killing frosts prior to harvesting or prolonged wet harvesting weather in the Northern Hemisphere oilseed producing countries. Persistent hot, dry weather at planting time for Southern Hemisphere oilseed crops can also be a market factor.

The weekly U.S. soybean crush is reported by the National Soybean Processors Association. Monthly soybean oil production is reported in a USDA soybean crush report. Weekly and cumulative U.S. soybean oil export sales and export shipments are available in the USDA *Export Sales* reports. Brazilian weekly and cumulative soybean complex exports, and Argentine export registrations are also reported. Monthly estimates of world oilseed, fats and oils, and soybean oil supply and demand are available in the USDA's Foreign Agricultural Service *Oilseeds and Products* report, and provide a guide to expected production and utilization for the current season compared with previous seasons. *Oil World,* the weekly West German leading oilseed trade publication, provides a wealth of information on world oilseeds, protein meals and fats and oils. The USDA *Oil Crops Outlook and Situation* reports is also an excellent source of information.

VEGETABLE OIL PRICES
(IN US DOLLARS PER METRIC TON)

YEAR BEGINNING OCTOBER 1	SOYBEAN		COTTONSEED		SUNFLOWERSEED		PEANUT		PALM	RAPESEED	COCONUT	LINSEED
	US 1/	ROTT 2/	US 3/	ROTT 4/	US 5/	ROTT 6/	US 7/	ROTT 8/	ROTT 9/	ROTT 10/	ROTT 11/	ROTT 12/
1978/79												
AVERAGE	$603	$654	$697	$780	$725	$768	$798	$990	$652	$628	$970	$601
1979/80												
AVERAGE	$536	$613	$559	$683	$573	$634	$609	$782	$597	$582	$746	$679
1980/81												
AVERAGE	$502	$540	$569	$666	$594	$666	$892	$1,112	$589	$510	$583	$692
1981/82												
AVERAGE	$418	$463	$443	$582	$550	$558	$609	$667	$479	$438	$500	$562
1982/83												
OCTOBER	382	416	372	495	474	475	505	470	355	390	406	456
NOVEMBER	386	403	370	498	489	471	554	471	362	381	416	455
DECEMBER	367	399	362	495	428	458	575	466	376	383	429	417
JANUARY	362	397	358	490	428	454	564	461	372	386	435	420
FEBRUARY	380	395	392	493	417	429	566	452	367	390	451	398
MARCH	390	394	402	515	423	421	532	445	378	396	482	385
APRIL	428	434	471	599	442	452	554	495	419	402	576	400
MAY	435	434	516	621	463	464	582	548	432	427	622	419
JUNE	428	425	476	620	454	472	588	593	394	404	694	446
JULY	478	477	520	680	503	497	677	635	425	425	846	453
AUGUST	665	651	734	873	664	655	950	969	559	580	985	558
SEPTEMBER	756	736	798	949	761	759	1,113	1,052	645	677	954	661
AVERAGE	$455	$463	$481	$611	$496	$501	$647	$588	$424	$491	$680	$506
1983/84												
OCTOBER	675	687	699	879	683	723	1,118	1,054	671	656	860	601
NOVEMBER	619	652	639	823	635	685	1,076	951	661	634	884	548
DECEMBER	605	644	632	798	633	686	1,060	876	695	626	969	526
JANUARY	624	692	658	850	678	746	1,043	983	875	669	1,069	526
FEBRUARY	600	669	642	780	645	689	1,025	1,024	875	656	1,158	486
MARCH	664	720	664	789	712	739	1,065	1,086	845	705	1,123	493
APRIL	706	772	692	870	772	825	1,160	1,159	841	754	1,150	510
MAY	857	914	899	980	948	955	1,281	1,171	951	869	1,314	629
JUNE	791	844	935	N/A	908	892	1,287	1,155	783	831	1,431	585
JULY	683	697	747	925	805	776	1,237	1,054	580	660	1,273	549
AUGUST	639	679	683	N/A	750	732	1,030	984	562	639	1,079	594
SEPTEMBER	617	694	N/A	745	732	734	864	931	611	651	1,170	624
AVERAGE	$673	$722	$717	$855	$938	$765	$1,092	$1,036	$746	$696	$1,123	$556
1984/85												
OCTOBER	$675	679	661	770	705	702	809	836	615	618	1,175	603
NOVEMBER	703	698	683	833	728	726	908	905	616	631	993	624
DECEMBER	627	630	646	747	667	682	913	912	592	561	920	635
JANUARY	618	630	606	750	644	659	864	890	583	592	856	579
FEBRUARY	653	664	657	780	667	670	851	873	595	631	756	598
MARCH	692	667	639	763	683	661	882	944	651	650	843	626
AVERAGE	$661	$661	$649	$774	$682	$683	$871	$893	$609	$614	$924	$611

1/ AVERAGE WHOLESALE, CRUDE, TANK, DECATUR. 2/ DUTCH, FOB EX-MILL ROTTERDAM.
3/ CRUDE, TANK CARS, FOB VALLEY POINTS. 4/ US, PBSY, CIF ROTTERDAM.
5/ FOB MINNEAPOLIS. 6/ ANY ORIGIN, EX-TANK ROTTERDAM. 7/ CRUDE, TANK CARS, FOB SE MILLS..
8/ ANY ORIGIN, CIF ROTTERDAM. 9/ SUMATRA/MALAYSIA, CIF NW EUROPE. 10/ FOB EX-MILL ROTTERDAM.
11/ PHILIPPINES/INDONESIA, CIF ROTTERDAM.
12/ ANY ORIGIN, EX-TANK, ROTTERDAM.

SOURCE: USDA, OIL WORLD, PUBLIC LEDGER, WALL STREET JOURNAL,
AGRICULTURAL MARKETING SERVICES

FOREIGN AGRICULTURAL SERVICE
OILSEEDS AND PRODUCTS

OIL IMPORTS: MAJOR COUNTRIES & WORLD, 1973/74 - 1984/85
(IN 1,000 METRIC TONS)

COUNTRY	73/74	74/75	75/76	76/77	77/78	78/79	79/80	80/81	81/82	82/83	83/84	84/85	LAST ANN/CH	73-84 AV ANN/CH
UNITED STATES	537	935	1,021	814	711	707	642	705	654	756	750	794	44	21
INDIA	73	28	150	1,085	1,208	1,085	1,350	1,308	953	1,227	1,520	1,410	(110)	145
CHINA	39	66	51	137	244	205	232	152	87	54	46	52	6	1
USSR	29	61	128	124	167	274	435	731	1,024	840	701	786	85	67
JAPAN	184	175	227	211	224	254	239	276	323	295	292	303	11	11
BRAZIL	14	10	11	11	11	139	18	11	33	55	111	61	(50)	10
INDONESIA	0	0	2	11	92	27	0	33	1	0	30	20	(10)	3
GERMANY, FED REP	690	656	592	650	686	760	791	855	893	956	999	977	(22)	31
ITALY	436	355	402	365	342	462	392	283	468	454	330	414	84	(11)
UNITED KINGDOM	604	576	659	618	675	679	653	592	746	744	739	742	3	14
NIGERIA	0	0	19	33	78	106	179	252	369	284	232	303	71	23
PAKISTAN	155	194	330	232	348	490	463	471	528	665	660	670	10	51
FRANCE	490	532	600	592	591	676	679	654	715	727	658	665	7	17
SPAIN	49	121	76	57	111	150	97	86	85	65	66	67	1	2
MEXICO	53	90	6	18	54	7	48	34	87	121	85	85	0	3
TURKEY	6	74	83	15	29	81	139	159	172	184	192	205	13	19
NETHERLANDS	458	543	552	557	565	611	677	694	763	828	801	907	106	34
MALAYSIA	6	5	3	4	6	4	7	3	3	12	21	4	(17)	2
EGYPT	82	300	249	278	282	229	297	339	311	305	361	397	36	28
CANADA	96	113	141	106	96	92	93	66	65	68	66	74	8	(3)
POLAND	91	94	94	92	77	96	143	104	122	120	137	146	9	5
ARGENTINA	0	0	0	4	3	3	3	3	6	4	6	6	0	1
IRAN	227	218	246	187	355	258	328	298	347	340	276	341	65	5
ROMANIA	17	21	16	11	11	12	9	20	16	0	0	0	0	(2)
BELGIUM-LUX.	135	144	178	175	175	214	238	206	263	269	259	277	18	12
COLOMBIA	29	25	85	68	84	143	125	132	168	109	97	98	1	7
MOROCCO	115	162	117	138	139	178	193	144	181	189	203	229	26	9
ALGERIA	90	80	72	114	140	179	161	209	166	185	207	260	53	12
YUGOSLAVIA	53	120	115	48	57	33	27	174	80	156	70	95	25	2
PHILIPPINES	4	1	1	3	4	9	13	7	11	32	21	22	1	2
GREECE	12	10	18	1	0	0	4	5	0	0	0	0	0	(1)
SOUTH AFRICA	17	8	32	22	21	25	38	48	39	111	110	29	(81)	9
KOREA, REP OF	4	4	10	7	21	38	41	68	102	126	113	128	15	11
PORTUGAL	17	13	0	0	7	25	17	21	24	20	20	21	1	0
TAIWAN	6	18	8	10	7	7	7	13	24	40	35	43	8	3
BURMA	0	0	17	24	12	18	29	28	32	16	20	25	5	2
GERMAN DEM REP	114	93	75	100	67	107	112	109	107	90	101	101	0	(1)
VENEZUELA	32	88	104	177	207	199	183	251	165	152	176	182	6	14
AUSTRALIA	23	29	82	77	85	82	78	67	75	69	73	71	(2)	5
IRAQ	73	123	106	104	123	140	114	109	186	141	161	211	50	9
ZAIRE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CZECHOSLOVAKIA	44	40	40	54	47	52	24	21	32	20	22	24	2	(2)
BANGLADESH	65	75	97	76	52	68	85	140	144	164	115	119	4	5
ECUADOR	22	10	51	42	43	41	33	44	43	58	52	52	0	3
BULGARIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB-TOTAL	5,191	6,210	6,866	7,452	8,257	8,965	9,436	9,925	10,613	11,051	10,934	11,416	482	574
ANNUAL CHANGE	N.A.	1019	656	586	805	708	471	489	688	438	-117	482	599	(12)
OTHER COUNTRIES	1,130	923	1,019	1,284	1,414	1,825	2,390	2,210	2,366	2,487	2,273	2,464	191	114
ANNUAL CHANGE	N.A.	-207	96	265	130	411	565	-180	156	121	-214	191	405	(21)
WORLD TOTAL	6,321	7,133	7,885	8,736	9,671	10,790	11,826	12,135	12,979	13,538	13,207	13,880	673	689
LINEAR TREND	6,553	7,319	8,085	8,851	9,618	10,384	11,150	11,916	12,682	13,449	14,215	14,981	766	766
TREND DEV.	-232	-186	-200	-115	53	406	676	219	297	89	-1008	-1101	(93)	(78)

SOURCE: COUNSELOR AND ATTACHE REPORTS, OFFICIAL STATISTICS, USDA ESTIMATES

OIL IMPORTS AS A SHARE OF DISAPPEARANCE: MAJOR COUNTRIES & WORLD, 1973/74 - 1984/85
(IN PERCENT)

COUNTRY	73/74	74/75	75/76	76/77	77/78	78/79	79/80	80/81	81/82	82/83	83/84	84/85	LAST ANN/CH	73-84 AV ANN/CH
UNITED STATES	11.9	21.5	20.3	17.3	14.1	13.5	12.3	13.4	11.9	13.4	13.5	13.9	0.4	0.2
INDIA	3.1	1.1	5.3	31.0	33.2	30.3	35.8	35.2	23.9	31.9	33.4	30.2	-3.2	3.0
CHINA	1.9	3.2	2.4	7.3	12.4	8.9	8.6	5.0	2.2	1.2	1.1	1.2	0.1	-0.1
USSR	1.0	2.0	4.6	4.2	5.3	8.8	13.5	23.0	28.6	23.5	21.4	22.6	1.3	2.0
JAPAN	16.3	16.0	18.4	16.6	16.3	17.4	16.5	17.3	19.7	17.5	16.9	17.3	0.4	0.1
BRAZIL	1.6	1.1	1.2	0.9	0.9	9.4	1.1	0.7	2.0	3.3	6.8	3.6	-3.1	0.5
INDONESIA	0.0	0.0	0.3	1.4	10.4	2.8	0.0	2.4	0.1	0.0	2.0	1.3	-0.7	0.2
GERMANY, FED REP	57.7	58.5	47.5	51.8	54.7	54.6	55.4	57.4	61.7	60.9	65.8	66.1	0.2	0.8
ITALY	36.4	34.9	33.2	37.0	29.8	38.6	30.6	23.2	38.3	37.7	27.0	33.1	6.1	-0.9
UNITED KINGDOM	76.2	73.4	70.3	68.1	68.3	64.6	64.5	58.7	65.8	68.5	69.8	65.9	-3.9	-0.6
NIGERIA	0.0	0.0	2.7	4.8	10.7	14.1	21.4	26.3	33.2	27.5	23.9	28.4	4.5	2.4
PAKISTAN	41.2	49.7	65.1	57.7	66.0	76.8	76.3	66.6	67.9	72.8	76.5	71.5	-5.0	3.5
FRANCE	65.8	74.3	77.2	78.1	78.5	84.4	80.5	82.9	81.6	81.1	77.7	77.3	-0.4	1.2
SPAIN	6.8	15.9	10.5	8.6	16.0	18.7	13.3	12.6	11.1	8.5	9.0	7.9	-1.1	0.2
MEXICO	13.5	21.3	1.9	5.4	12.1	1.5	8.5	5.1	12.9	17.7	11.2	10.6	-0.6	-0.2
TURKEY	1.4	16.1	17.7	3.6	6.5	17.4	25.7	27.4	29.6	28.7	29.3	29.2	-0.1	2.8
NETHERLANDS	100.0	99.3	94.5	101.6	95.1	89.5	98.4	107.3	113.0	126.4	116.1	137.6	21.5	1.6
MALAYSIA	3.9	3.4	1.8	1.6	2.9	1.4	1.7	0.6	0.5	2.0	3.3	0.6	-2.7	-0.1
EGYPT	39.0	72.5	70.1	72.4	69.8	63.1	67.5	69.3	67.0	60.3	66.7	68.8	2.1	2.8
CANADA	31.8	35.4	37.4	30.4	22.2	21.6	20.3	14.2	14.3	13.9	13.3	13.6	0.3	-1.9
POLAND	33.8	33.9	35.1	29.6	27.0	27.6	47.2	30.0	39.4	35.4	40.9	36.6	-4.3	0.7
ARGENTINA	0.0	0.0	0.0	1.4	0.9	0.9	0.9	0.9	1.6	1.1	1.5	1.5	.0	0.2
IRAN	78.5	73.4	79.6	73.0	84.1	81.6	89.9	94.0	93.0	93.2	91.1	92.2	1.1	1.3
ROMANIA	9.1	10.4	5.7	4.4	4.3	4.0	2.7	5.4	4.4	0.0	0.0	0.0	0.0	-0.9
BELGIUM-LUX.	79.4	85.7	90.8	88.4	83.7	91.8	87.5	78.9	84.8	83.3	81.4	89.4	7.9	0.2
COLOMBIA	20.3	16.6	49.7	39.1	43.8	60.6	44.3	49.8	53.3	37.3	34.8	31.9	-2.8	1.4
MOROCCO	79.3	87.1	75.5	80.2	82.2	82.4	81.8	83.2	78.0	75.0	82.2	78.4	-3.8	0.3
ALGERIA	76.3	62.5	63.7	69.9	78.2	82.9	81.7	83.3	87.4	88.5	92.0	92.9	0.9	1.6
YUGOSLAVIA	24.1	47.8	47.9	26.2	20.5	14.8	8.9	50.1	32.0	46.8	32.7	34.2	1.5	0.9
PHILIPPINES	2.2	0.5	0.5	1.2	3.0	4.3	6.2	3.1	3.4	11.0	8.0	8.0	.0	0.6
GREECE	5.7	4.4	7.0	0.5	0.0	0.0	1.7	2.1	0.0	0.0	0.0	0.0	0.0	-0.6
SOUTH AFRICA	8.1	4.1	16.9	11.8	8.9	10.9	12.8	17.0	17.0	45.1	45.6	11.5	-34.1	3.8
KOREA, REP OF	19.0	15.4	18.5	14.6	32.3	45.8	41.0	49.6	52.8	53.2	49.6	51.6	2.1	3.1
PORTUGAL	15.9	11.5	0.0	0.0	4.6	13.8	10.2	10.6	11.4	7.8	8.2	8.6	0.5	-0.8
TAIWAN	6.1	13.6	5.5	7.3	5.0	4.4	4.3	7.7	11.7	17.4	15.5	18.4	2.9	0.9
BURMA	0.0	0.0	15.5	17.4	9.4	15.9	24.8	18.9	16.3	8.6	9.1	10.9	1.8	0.9
GERMAN DEM REP	50.2	43.5	35.0	45.9	34.5	45.7	57.1	48.0	46.1	43.7	46.5	44.3	-2.2	-0.4
VENEZUELA	40.5	57.9	68.9	81.2	81.8	84.3	82.1	88.4	82.1	83.1	81.1	83.5	2.4	4.1
AUSTRALIA	23.2	28.7	59.9	61.1	49.7	45.8	49.4	40.9	43.4	45.1	39.9	32.9	-7.0	1.7
IRAQ	91.3	101.7	98.1	96.3	97.6	94.0	87.0	96.5	97.9	97.2	93.1	98.1	5.1	0.2
ZAIRE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CZECHOSLOVAKIA	31.4	31.5	27.4	33.8	29.4	30.1	25.3	14.2	20.9	11.0	13.1	12.4	-0.7	-1.8
BANGLADESH	59.6	57.3	65.5	62.8	73.2	58.1	53.8	88.1	72.0	79.2	59.0	63.6	4.7	-0.1
ECUADOR	53.7	32.3	61.4	54.5	44.8	39.4	30.0	33.1	29.7	37.4	30.6	28.3	-2.3	-2.3
BULGARIA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SUB-TOTAL	20.1	23.6	24.3	26.1	27.0	27.6	27.8	28.0	27.8	28.2	27.8	27.9	0.1	0.8
ANNUAL CHANGE	N.A.	3.4	0.7	1.8	0.9	0.6	0.2	0.2	-0.1	0.3	-0.4	0.1	0.5	.0
OTHER COUNTRIES	38.5	30.4	32.7	36.7	40.8	47.4	59.8	55.2	54.7	57.7	53.5	53.5	.0	1.5
ANNUAL CHANGE	N.A.	-8.1	2.3	4.0	4.1	6.6	12.4	-4.6	-0.5	3.0	-4.2	.0	4.2	-0.4
WORLD TOTAL	22.0	24.3	25.1	27.2	28.4	29.7	31.1	30.7	30.6	31.1	30.3	30.5	0.2	0.8
ANNUAL CHANGE	N.A.	2.3	0.9	2.1	1.1	1.3	1.4	-0.4	-0.2	0.5	-0.8	0.2	1.0	-0.1

SOURCE: COUNSELOR AND ATTACHE REPORTS, OFFICIAL STATISTICS, USDA ESTIMATES

SOYBEAN OIL IMPORTS: MAJOR COUNTRIES & WORLD, 1973/74 - 1984/85
(IN 1,000 METRIC TONS)

COUNTRY	73/74	74/75	75/76	76/77	77/78	78/79	79/80	80/81	81/82	82/83	83/84	84/85	LAST ANN/CH	73-84 AV ANN/CH
UNITED STATES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INDIA	19	4	53	438	511	553	631	639	460	537	750	600	(150)	73
CHINA	0	11	13	85	184	122	100	73	30	10	0	5	5	0
USSR	0	0	0	0	3	20	72	112	192	191	75	100	25	8
JAPAN	20	14	12	0	0	0	0	9	58	8	10	10	0	(1)
BRAZIL	0	0	0	0	0	127	3	0	22	43	100	50	(50)	10
INDONESIA	0	0	0	0	0	0	0	0	0	0	15	20	5	2
GERMANY,FED REP	37	25	33	52	96	96	129	145	165	127	193	185	(8)	16
ITALY	131	107	127	100	82	79	71	34	41	38	30	40	10	(10)
UNITED KINGDOM	40	29	12	20	52	74	67	40	65	117	100	100	0	6
NIGERIA	0	0	0	17	61	44	63	26	62	60	50	50	0	5
PAKISTAN	118	63	192	98	206	277	217	219	304	310	350	330	(20)	23
FRANCE	85	90	93	91	110	109	100	104	108	100	100	105	5	2
SPAIN	7	20	12	7	12	16	11	5	1	0	0	0	0	(1)
MEXICO	40	77	4	15	34	5	28	25	80	26	67	50	(17)	3
TURKEY	6	69	62	11	29	81	102	135	142	106	110	120	10	10
NETHERLANDS	95	79	39	73	62	36	54	56	44	41	52	42	(10)	(4)
MALAYSIA	1	1	0	1	1	1	2	2	2	11	20	3	(17)	2
EGYPT	22	20	40	47	28	24	37	92	20	61	50	65	15	3
CANADA	34	20	31	27	28	26	29	8	4	5	5	5	0	(3)
POLAND	4	7	21	28	6	30	30	36	31	20	17	40	23	1
ARGENTINA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRAN	179	148	219	165	313	215	264	292	346	279	250	280	30	7
ROMANIA	0	5	0	0	0	0	0	0	0	0	0	0	0	0
BELGIUM-LUX.	14	14	14	16	22	35	34	28	30	34	25	25	0	1
COLOMBIA	7	7	32	40	50	81	82	98	126	90	60	75	15	5
MOROCCO	64	77	85	131	126	149	146	96	178	164	170	180	10	11
ALGERIA	0	0	0	0	0	0	2	5	6	9	10	10	0	1
YUGOSLAVIA	50	118	90	22	50	0	16	135	55	146	50	75	25	0
PHILIPPINES	0	0	0	0	2	4	1	2	3	11	11	10	(1)	1
GREECE	3	10	17	1	0	0	0	0	0	0	0	0	0	(0)
SOUTH AFRICA	5	3	6	2	3	4	7	17	12	8	10	9	(1)	1
KOREA, REP OF	0	0	1	0	0	0	0	0	0	0	0	0	0	0
PORTUGAL	2	3	0	0	0	0	0	0	0	0	0	0	0	(0)
TAIWAN	1	10	1	0	0	0	0	0	6	6	2	6	4	0
BURMA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GERMAN DEM REP	19	9	11	42	27	59	30	30	30	31	32	33	1	1
VENEZUELA	2	0	12	0	15	38	21	56	47	43	50	46	(4)	5
AUSTRALIA	6	13	31	27	24	18	23	19	25	25	24	25	1	2
IRAQ	0	0	0	0	0	0	5	0	0	1	1	31	30	0
ZAIRE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CZECHOSLOVAKIA	7	7	6	4	5	5	5	0	9	8	8	10	2	0
BANGLADESH	35	23	45	35	19	40	53	27	37	67	40	50	10	1
ECUADOR	18	9	23	23	40	30	30	41	40	55	50	50	0	3
BULGARIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB-TOTAL	1,071	1,092	1,337	1,618	2,201	2,398	2,465	2,606	2,781	2,788	2,887	2,835	(52)	182
ANNUAL CHANGE	N.A.	21	245	281	583	197	67	141	175	7	99	-52	(151)	10
OTHER COUNTRIES	386	363	330	435	490	531	636	740	716	856	583	845	262	20
ANNUAL CHANGE	N.A.	-23	-33	105	55	41	105	104	-24	140	-273	262	535	(27)
WORLD TOTAL	1,457	1,455	1,667	2,053	2,691	2,929	3,101	3,346	3,497	3,644	3,470	3,680	210	201
LINEAR TREND	1,423	1,672	1,920	2,168	2,416	2,665	2,913	3,161	3,409	3,658	3,906	4,154	248	248
TREND DEV.	34	-217	-253	-115	275	264	188	185	88	-14	-436	-474	(38)	(47)

SOURCE: COUNSELOR AND ATTACHE REPORTS, OFFICIAL STATISTICS, USDA ESTIMATES

SOYBEAN OIL IMPORTS AS A SHARE OF TOTAL OIL IMPORTS: MAJOR COUNTRIES & WORLD, 1973/74 - 1984/85
(IN PERCENT)

COUNTRY	73/74	74/75	75/76	76/77	77/78	78/79	79/80	80/81	81/82	82/83	83/84	84/85	LAST ANN/CH	73-84 AV ANN/CH
UNITED STATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDIA	26.0	14.3	35.3	40.4	42.3	51.0	46.7	48.9	48.3	43.8	49.3	42.6	-6.8	2.3
CHINA	0.0	16.7	25.5	62.0	75.4	59.5	43.1	48.0	34.5	18.5	0.0	9.6	9.6	0.0
USSR	0.0	0.0	0.0	0.0	1.8	7.3	16.6	15.3	18.8	22.7	10.7	12.7	2.0	1.1
JAPAN	10.9	8.0	5.3	0.0	0.0	0.0	0.0	3.3	18.0	2.7	3.4	3.3	-0.1	-0.7
BRAZIL	0.0	0.0	0.0	0.0	0.0	91.4	16.7	0.0	66.7	78.2	90.1	82.0	-9.1	9.0
INDONESIA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	100.0	50.0	5.0
GERMANY,FED REP	5.4	3.8	5.6	8.0	14.0	12.6	16.3	17.0	18.5	13.3	19.3	18.9	-0.4	1.4
ITALY	30.0	30.1	31.6	27.4	24.0	17.1	18.1	12.0	8.8	8.4	9.1	9.7	0.6	-2.1
UNITED KINGDOM	6.6	5.0	1.8	3.2	7.7	10.9	10.3	6.8	8.7	15.7	13.5	13.5	-0.1	0.7
NIGERIA	0.0	0.0	0.0	51.5	78.2	41.5	35.2	10.3	16.8	21.1	21.6	16.5	-5.1	2.2
PAKISTAN	76.1	32.5	58.2	42.2	59.2	56.5	46.9	46.5	57.6	46.6	53.0	49.3	-3.8	-2.3
FRANCE	17.3	16.9	15.5	15.4	18.6	16.1	14.7	15.9	15.1	13.8	15.2	15.8	0.6	-0.2
SPAIN	14.3	16.5	15.8	12.3	10.8	10.7	11.3	5.8	1.2	0.0	0.0	0.0	0.0	-1.4
MEXICO	75.5	85.6	66.7	83.3	63.0	71.4	58.3	73.5	92.0	21.5	78.8	58.8	-20.0	0.3
TURKEY	100.0	93.2	74.7	73.3	100.0	100.0	73.4	84.9	82.6	57.6	57.3	58.5	1.2	-4.3
NETHERLANDS	20.7	14.5	7.1	13.1	11.0	5.9	8.0	8.1	5.8	5.0	6.5	4.6	-1.9	-1.4
MALAYSIA	16.7	20.0	0.0	25.0	16.7	25.0	28.6	66.7	66.7	91.7	95.2	75.0	-20.2	7.9
EGYPT	26.8	6.7	16.1	16.9	9.9	10.5	12.5	27.1	6.4	20.0	13.9	16.4	2.5	-1.3
CANADA	35.4	17.7	22.0	25.5	29.2	28.3	31.2	12.1	6.2	7.4	7.6	6.8	-0.8	-2.8
POLAND	4.4	7.4	22.3	30.4	7.8	31.3	21.0	34.6	25.4	16.7	12.4	27.4	15.0	0.8
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IRAN	78.9	67.9	89.0	88.2	88.2	83.3	80.5	98.0	99.7	82.1	90.6	82.1	-8.5	1.2
ROMANIA	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BELGIUM-LUX.	10.4	9.7	7.9	9.1	12.6	16.4	14.3	13.6	11.4	12.6	9.7	9.0	-0.6	-0.1
COLOMBIA	24.1	28.0	37.6	58.8	59.5	56.6	65.6	74.2	75.0	82.6	61.9	76.5	14.7	3.8
MOROCCO	55.7	47.5	72.6	94.9	90.6	83.7	75.6	66.7	98.3	86.8	83.7	78.6	-5.1	2.8
ALGERIA	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.4	3.6	4.9	4.8	3.8	-1.0	0.5
YUGOSLAVIA	94.3	98.3	78.3	45.8	87.7	0.0	59.3	77.6	68.8	93.6	71.4	78.9	7.5	-2.3
PHILIPPINES	0.0	0.0	0.0	0.0	50.0	44.4	7.7	28.6	27.3	34.4	52.4	45.5	-6.9	5.2
GREECE	25.0	100.0	94.4	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.5
SOUTH AFRICA	29.4	37.5	18.8	9.1	14.3	16.0	18.4	35.4	30.8	7.2	9.1	31.0	21.9	-2.0
KOREA, REP OF	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PORTUGAL	11.8	23.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2
TAIWAN	16.7	55.6	12.5	0.0	0.0	0.0	0.0	0.0	25.0	15.0	5.7	14.0	8.2	-1.1
BURMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GERMAN DEM REP	16.7	9.7	14.7	42.0	40.3	55.1	26.8	27.5	28.0	34.4	31.7	32.7	1.0	1.5
VENEZUELA	6.3	0.0	11.5	0.0	7.2	19.1	11.5	22.3	28.5	28.3	28.4	25.3	-3.1	2.2
AUSTRALIA	26.1	44.8	37.8	35.1	28.2	22.0	29.5	28.4	33.3	36.2	32.9	35.2	2.3	0.7
IRAQ	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.7	0.6	14.7	14.1	0.1
ZAIRE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CZECHOSLOVAKIA	15.9	17.5	15.0	7.4	10.6	9.6	20.8	0.0	28.1	40.0	36.4	41.7	5.3	2.0
BANGLADESH	53.8	30.7	46.4	46.1	36.5	58.8	62.4	19.3	25.7	40.9	34.8	42.0	7.2	-1.9
ECUADOR	81.8	90.0	45.1	54.8	93.0	73.2	90.9	93.2	93.0	94.8	96.2	96.2	0.0	1.4
BULGARIA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SUB-TOTAL	20.6	17.6	19.5	21.7	26.7	26.7	26.1	26.3	26.2	25.2	26.4	24.8	-1.6	0.6
ANNUAL CHANGE	N.A.	-3.0	1.9	2.2	4.9	0.1	-0.6	0.1	-0.1	-1.0	1.2	-1.6	-2.7	0.1
OTHER COUNTRIES	34.2	39.3	32.4	33.9	34.7	29.1	26.6	33.5	30.3	34.4	25.6	34.3	8.6	-0.9
ANNUAL CHANGE	N.A.	5.2	-6.9	1.5	0.8	-5.6	-2.5	6.9	-3.2	4.2	-8.8	8.6	17.4	-0.9
WORLD TOTAL	23.1	20.4	21.1	23.5	27.8	27.1	26.2	27.6	26.9	26.9	26.3	26.5	0.2	0.3
ANNUAL CHANGE	N.A.	-2.7	0.7	2.4	4.3	-0.7	-0.9	1.4	-0.6	.0	-0.6	0.2	0.9	-0.1

SOURCE: COUNSELOR AND ATTACHE REPORTS, OFFICIAL STATISTICS, USDA ESTIMATES

PER CAPITA OIL DISAPPEARANCE: MAJOR COUNTRIES & WORLD, 1973/74 - 1984/85
(IN KILOS PER PERSON)

COUNTRY	73/74	74/75	75/76	76/77	77/78	78/79	79/80	80/81	81/82	82/83	83/84	84/85	LAST ANN/CH	73-84 AV ANN/CH
UNITED STATES	21.08	20.10	23.12	21.34	22.70	23.33	22.99	22.92	23.72	24.10	23.51	23.88	0.37	0.24
INDIA	3.95	4.03	4.45	5.45	5.54	5.33	5.50	5.31	5.57	5.27	6.10	6.12	0.02	0.21
CHINA	2.25	2.19	2.19	1.93	2.00	2.30	2.67	2.96	3.73	4.23	3.96	3.94	-0.02	0.17
USSR	11.87	12.12	10.92	11.50	11.97	11.77	12.09	11.90	13.28	13.10	11.95	12.55	0.60	0.01
JAPAN	10.26	9.78	10.96	11.17	11.96	12.59	12.39	13.54	13.81	14.17	14.43	14.51	0.08	0.42
BRAZIL	8.47	8.17	8.17	10.35	10.79	12.35	13.68	12.97	12.77	12.96	12.30	12.33	0.03	0.38
INDONESIA	3.45	4.57	4.97	5.44	6.12	6.42	5.70	8.94	8.33	8.25	9.27	9.04	-0.22	0.58
GERMANY, FED REP	19.26	18.13	20.26	20.42	20.44	22.69	23.21	24.15	23.48	25.51	24.70	24.11	-0.60	0.54
ITALY	21.73	18.34	21.74	17.64	20.49	21.35	22.80	21.67	21.72	21.35	21.62	22.12	0.50	-0.01
UNITED KINGDOM	14.11	13.98	16.71	16.16	17.63	18.72	18.02	17.93	20.18	19.32	18.83	20.01	1.18	0.47
NIGERIA	9.54	9.75	10.24	9.91	10.11	10.07	10.86	12.01	13.47	12.12	11.00	11.71	0.71	0.15
PAKISTAN	5.15	5.21	6.61	5.09	6.55	7.71	7.08	7.92	8.44	9.64	8.87	9.38	0.52	0.37
FRANCE	14.19	13.57	14.68	14.26	14.12	14.96	15.68	14.59	16.12	16.41	15.44	15.61	0.17	0.13
SPAIN	20.52	21.42	20.11	18.25	18.80	21.53	19.53	18.06	20.17	20.06	19.12	21.93	2.80	-0.14
MEXICO	6.56	6.87	5.03	5.18	6.72	6.76	8.04	9.31	9.13	9.05	9.80	10.07	0.27	0.32
TURKEY	10.56	11.26	11.21	9.58	10.13	10.36	11.75	12.32	12.08	13.04	13.05	13.68	0.63	0.25
NETHERLANDS	33.83	40.06	42.41	39.56	42.62	48.68	48.64	45.42	47.17	45.57	47.79	45.45	-2.35	1.40
MALAYSIA 1/	12.83	11.87	13.23	18.81	15.51	20.26	30.28	32.73	37.86	40.88	41.42	41.62	0.20	2.86
EGYPT	5.84	11.26	9.42	9.93	10.17	8.88	10.44	11.28	10.40	11.04	11.48	11.92	0.44	0.56
CANADA	13.49	14.04	16.37	14.97	18.38	17.86	19.02	19.09	18.40	19.61	19.81	21.41	1.61	0.63
POLAND	8.00	8.15	7.81	8.98	8.16	9.87	8.52	9.67	8.56	9.27	9.08	10.72	1.64	0.11
ARGENTINA	14.68	14.66	12.20	11.00	12.40	12.41	12.43	11.88	13.24	12.08	12.97	12.89	-0.08	-0.17
IRAN	8.92	8.90	8.99	7.22	11.55	8.39	9.42	7.93	9.05	8.59	6.91	8.19	1.27	-0.20
ROMANIA	8.89	9.46	13.06	11.54	11.81	13.61	15.18	16.46	16.13	14.66	14.35	15.74	1.40	0.55
BELGIUM	16.80	16.55	19.27	19.44	20.51	22.84	26.64	25.54	30.32	31.57	31.06	30.26	-0.81	1.43
COLOMBIA	6.05	6.27	6.95	6.98	7.61	9.23	10.82	9.98	11.62	10.56	9.88	10.64	0.77	0.38
MOROCCO	8.20	10.23	8.29	8.94	8.76	10.60	11.25	8.01	10.44	11.01	10.48	12.04	1.56	0.23
ALGERIA	7.54	7.93	6.79	9.50	10.12	11.84	10.47	12.92	9.47	10.10	10.54	12.71	2.17	0.30
YUGOSLAVIA	10.40	11.76	11.14	8.41	12.67	10.08	13.63	15.44	11.04	14.59	9.31	12.00	2.70	-0.11
PHILIPPINES	4.38	4.27	4.92	5.63	2.85	4.38	4.26	4.53	6.21	5.49	4.79	4.91	0.12	0.04
GREECE	23.32	25.09	28.14	23.53	26.41	26.50	25.10	24.37	24.46	25.76	25.84	26.91	1.06	0.25
SOUTH AFRICA	8.41	7.66	7.24	6.96	8.66	8.17	10.34	9.58	7.62	7.95	7.60	7.76	0.16	-0.08
KOREA, REP OF	0.58	0.71	1.45	1.27	1.69	2.13	2.53	3.41	4.74	5.73	5.43	5.82	0.39	0.48
PORTUGAL	11.76	11.99	14.17	16.43	15.52	18.39	16.90	20.04	21.16	25.78	24.39	24.10	-0.29	1.26
TAIWAN	6.26	8.19	8.77	8.16	8.12	9.05	9.21	9.26	11.15	12.23	11.80	11.99	0.20	0.55
BURMA	3.33	2.92	3.52	4.31	3.90	3.36	3.40	4.19	5.42	5.05	5.77	5.89	0.12	0.24
GERMAN DEM REP	13.41	12.70	12.75	13.00	11.58	13.97	11.71	13.56	13.87	12.32	12.98	13.64	0.66	-0.04
VENEZUELA	6.26	11.63	11.07	15.22	16.80	15.01	13.68	16.83	11.53	10.17	11.70	11.40	-0.30	0.54
AUSTRALIA	7.28	7.33	9.84	8.95	12.00	12.41	10.81	11.05	11.48	10.02	11.84	13.79	1.96	0.46
IRAQ	7.44	10.88	9.40	9.09	10.26	11.73	9.98	8.32	13.54	9.99	11.53	13.86	2.33	0.41
ZAIRE	5.88	6.44	6.22	6.69	6.19	7.59	7.09	7.26	7.41	6.37	6.19	6.16	-0.02	0.03
CZECHOSLOVAKIA	9.55	8.60	9.81	10.67	10.60	11.40	6.23	9.66	9.96	11.74	10.86	12.44	1.58	0.13
BANGLADESH	1.46	1.72	1.90	1.51	0.86	1.37	1.79	1.75	2.14	2.14	1.96	1.82	-0.14	0.05
ECUADOR	6.12	4.50	11.68	10.51	12.72	13.37	13.71	16.07	16.98	17.59	18.70	19.62	0.92	1.26
BULGARIA	16.71	13.99	16.55	14.54	17.25	15.52	17.83	15.52	17.94	19.57	17.17	19.35	2.18	0.05
SUB-TOTAL	7.44	7.47	7.87	7.83	8.25	8.62	8.86	9.10	9.61	9.73	9.60	9.83	0.23	0.22
ANNUAL CHANGE	N.A.	0.03	0.41	-0.05	0.42	0.36	0.25	0.24	0.51	0.12	-0.13	0.23	0.36	-0.01
OTHER COUNTRIES	5.19	5.25	5.27	5.79	5.62	6.10	6.19	6.06	6.42	6.25	6.01	6.37	0.36	0.08
ANNUAL CHANGE	N.A.	0.06	0.03	0.52	-0.18	0.48	0.09	-0.12	0.35	-0.17	-0.23	0.36	0.59	-0.02
WORLD TOTAL	7.12	7.16	7.51	7.54	7.88	8.26	8.48	8.66	9.15	9.22	9.07	9.32	0.24	0.20
LINEAR TREND	7.02	7.25	7.48	7.72	7.95	8.19	8.42	8.65	8.89	9.12	9.36	9.59	0.23	0.23
TREND DEV.	0.11	-0.09	0.02	-0.18	-0.07	0.07	0.06	0.01	0.26	0.10	-0.28	-0.27		

SOURCE: COUNSELOR AND ATTACHE REPORTS, OFFICIAL STATISTICS, USDA ESTIMATES

PALM OIL SUPPLY AND DISTRIBUTION, SELECTED COUNTRIES, 1979-85
(IN 1,000 METRIC TONS)

	1979	1980	1981	1982	1983	1984	1985
PRODUCTION							
SELECTED MAJOR PRODUCERS:							
MALAYSIA	2,188	2,576	2,824	3,512	3,018	3,500	3,900
INDONESIA	661	702	752	838	907	921	1,054
CHINA	93	100	106	112	115	110	110
PAPUA-N. GUINEA	36	39	45	50	55	60	60
AFRICA, TOTAL	1,092	1,169	1,162	1,183	1,180	1,134	1,147
NIGERIA	500	520	520	525	530	540	550
ZAIRE	173	171	175	175	159	157	150
IVORY COAST	124	132	147	160	162	133	135
CAMEROON	51	83	100	100	110	85	95
OTHERS	214	213	220	223	219	219	227
ALL OTHERS	215	242	279	308	348	410	456
WORLD TOTAL	4,255	4,828	5,168	6,003	5,623	6,135	6,747
EXPORTS							
MALAYSIA	1,931	2,258	2,469	2,768	2,893	2,860	3,310
SINGAPORE	492	679	423	502	420	395	400
INDONESIA	351	503	196	260	346	217	350
IVORY COAST	49	80	63	68	58	40	25
E.C.-10	92	127	115	99	126	120	129
OTHER AFRICA	6	24	17	16	13	14	12
ALL OTHERS	44	50	133	212	121	137	140
WORLD TOTAL	2,935	3,721	3,416	3,925	3,977	3,783	4,366
IMPORTS							
INDIA	376	595	431	410	598	450	650
SINGAPORE	518	715	433	561	446	415	420
PAKISTAN	233	233	237	220	355	310	360
USSR	105	107	131	339	293	310	340
UNITED STATES	142	116	122	113	149	160	190
IRAQ	140	109	109	186	140	160	150
NIGERIA	13	20	102	168	139	100	170
KENYA	47	71	96	70	100	125	135
SAUDI ARABIA	77	102	72	127	100	120	130
BANGLADESH	2	14	101	87	72	60	50
INDONESIA	0	0	33	0	0	15	0
E.C.-10	735	757	660	640	796	756	811
OTHERS	478	552	553	656	709	669	804
WORLD TOTAL	2,856	3,336	3,130	3,627	3,897	3,650	4,220
DOMESTIC CONSUMPTION							
NIGERIA	513	540	622	693	669	640	720
INDONESIA	297	206	569	568	591	715	705
INDIA	372	595	431	410	598	450	650
MALAYSIA	213	344	403	485	520	539	558
USSR	103	105	131	339	293	310	340
PAKISTAN	233	203	242	230	340	320	335
UNITED STATES	133	114	135	113	132	178	185
IRAQ	141	120	109	186	140	168	150
KENYA	67	71	96	70	100	125	135
SAUDI ARABIA	77	102	72	127	100	120	130
BANGLADESH	2	8	77	88	81	65	60
SINGAPORE	26	36	10	39	26	20	20
E.C.-10	674	648	554	577	673	653	680
OTHERS	1,256	1,383	1,405	1,521	1,686	1,547	1,843
WORLD TOTAL	4,057	4,475	4,906	5,446	5,949	5,950	6,541
ENDING STOCKS							
MALAYSIA	409	393	335	594	199	300	332
INDIA	50	50	50	50	50	50	50
UNITED STATES	37	39	26	26	43	25	30
INDONESIA	25	18	38	48	18	22	21
E.C.-10	69	37	32	41	44	36	47
OTHERS	38	99	121	102	95	68	81
WORLD TOTAL	608	626	602	861	449	501	561

SOURCE: Counselor and Attache Reports
Official Statistics
USDA Estimates

Foreign Agricultural Service
Oilseeds and Products

SUNFLOWERSEED OIL SUPPLY AND UTILIZATION
1980/81-1984/85
(1,000 METRIC TONS)

	1980/81	1981/82	1982/83	1983/84	1984/85
PRODUCTION					
USSR	1,483	1,602	1,775	1,675	1,482
ARGENTINA	427	681	900	820	1,160
CHINA	274	405	388	414	512
ROMANIA	323	321	334	275	351
SPAIN	169	188	256	255	329
TURKEY	252	223	228	275	260
HUNGARY	155	225	202	220	220
MEXICO	109	175	192	185	212
GERMANY (FRG)	256	190	173	185	185
UNITED STATES	298	137	303	204	184
FRANCE	80	88	121	146	175
BULGARIA	136	165	180	150	165
OTHER	779	752	746	805	971
TOTAL	4,741	5,152	5,798	5,609	6,206
EXPORTS					
ARGENTINA	207	435	656	570	880
HUNGARY	117	127	145	177	155
NETHERLANDS	71	110	150	125	125
UNITED STATES	301	103	229	188	115
GERMANY (FRG)	147	129	85	100	110
USSR	112	109	90	90	80
ROMANIA	82	75	105	80	75
BELGIUM	29	28	35	40	40
OTHER	143	98	97	137	138
TOTAL	1,180	1,186	1,557	1,467	1,678
IMPORTS					
USSR	154	130	160	178	250
EGYPT	47	27	25	120	225
FRANCE	142	178	141	143	160
GERMANY (FRG)	36	75	90	125	135
CUBA	75	95	120	100	120
ALGERIA	97	64	97	75	100
NETHERLANDS	25	77	80	53	70
VENEZUELA	84	30	56	78	61
IRAN	5	0	60	25	60
MEXICO	9	0	83	8	50
UNITED KINGDOM	9	25	38	40	30
OTHER	318	320	356	471	418
TOTAL	1,001	1,021	1,306	1,416	1,679
CONSUMPTION					
USSR	1,525	1,623	1,845	1,763	1,652
CHINA	274	405	388	414	512
TURKEY	236	232	265	320	300
FRANCE	213	249	248	268	300
SPAIN	147	235	251	235	291
ROMANIA	244	246	229	195	276
ARGENTINA	204	257	236	258	262
MEXICO	119	170	255	210	240
GERMANY (FRG)	154	142	178	211	210
SOUTH AFRICA	149	129	145	139	152
BULGARIA	116	140	155	135	150
OTHER	1,140	1,233	1,296	1,488	1,810
TOTAL	4,521	5,061	5,491	5,636	6,155
ENDING STOCKS					
ARGENTINA	51	40	48	40	58
MEXICO	4	9	29	12	34
FRANCE	22	26	25	25	30
SPAIN	36	20	32	20	28
OTHER	171	115	132	89	88
TOTAL	284	210	266	186	238

1/ CONSUMPTION DATA REPRESENT "APPARENT CONSUMPTION" AND INCLUDE ALL DISAPPEARANCE AS WELL AS SOME CHANGES IN STOCKS.

SOURCE: COUNSELOR AND ATTACHE REPORTS
OFFICIAL STATISTICS
USDA ESTIMATES

FOREIGN AGRICULTURAL SERVICE
OILSEEDS AND PRODUCTS

INDIA: VEGETABLE OIL IMPORTS BY COUNTRY OF ORIGIN 1981/82
(1,000 METRIC TONS)

	OCT	NOV	DEC	OCT-DEC 1ST QRT	JAN	FEB	MAR	JAN-MAR 2ND QRT	APR	MAY	JUN	APR-JUN 3RD QRT	JUL	AUG	SEPT	JUL-SEP 4TH QRT	OCT-SEP TOTAL
SOYBEAN OIL																	
BRAZIL	41.6	38.4	42.2	122.2	15.6	N/A	N/A	69.9	60.5	64.6	17.7	142.8	0.0	2.3	52.7	55.0	389.9
UNITED STATES	20.9	3.6	23.6	48.1	1.5	0.0	1.0	2.5	2.1	1.2	0.0	3.3	4.1	1.3	8.9	14.3	68.2
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2	0.0	0.0	0.0	0.0	2.2
TOTAL	62.5	42.0	65.8	170.3	17.1	0.0	1.0	72.4	62.6	65.8	19.9	148.3	4.1	3.6	61.6	69.3	460.3
PALM OIL																	
MALAYSIA	66.6	40.2	25.8	132.6	13.0	0.1	13.7	26.8	19.8	27.5	45.5	92.8	36.8	45.6	65.4	147.8	400.0
SINGAPORE	3.5	0.1	0.2	3.8	0.0	0.2	1.4	1.6	1.9	0.0	0.2	2.1	0.0	1.1	1.2	2.3	9.8
TOTAL	70.1	40.3	26.0	136.4	13.0	0.3	15.1	28.4	21.7	27.5	45.7	94.9	36.8	46.7	66.6	150.1	409.8
RAPESEED OIL																	
CANADA	4.0	6.4	0.0	10.4	0.0	0.0	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.9
FRANCE	12.4	0.0	0.0	12.4	0.0	0.0	5.4	5.4	0.0	0.0	5.5	5.5	0.0	8.7	6.8	15.5	38.8
NETHERLANDS	0.0	3.4	0.0	3.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.7
TOTAL	16.4	9.8	0.0	26.2	0.0	0.0	17.9	17.9	0.0	0.0	5.5	5.5	0.0	8.7	6.8	15.5	68.4
GRAND TOTAL	149.0	92.1	91.8	332.9	30.1	0.3	34.0	118.7	84.3	93.3	71.1	248.7	40.9	59.0	135.0	234.9	938.5

INDIA: VEGETABLE OIL IMPORTS BY COUNTRY OF ORIGIN 1982/83
(1,000 METRIC TONS)

	OCT	NOV	DEC	OCT-DEC 1ST QRT	JAN	FEB	MAR	JAN-MAR 2ND QRT	APR	MAY	JUN	APR-JUN 3RD QRT	JUL	AUG	SEPT	JUL-SEP 4TH QRT	OCT-SEP TOTAL
SOYBEAN OIL																	
BRAZIL	1.0	29.3	22.0	52.3	22.5	36.2	25.0	83.7	48.0	37.0	53.5	138.5	30.0	110.8	13.0	153.8	428.3
UNITED STATES	12.3	3.1	0.0	15.4	21.4	1.7	1.1	24.2	3.7	0.4	3.0	7.1	0.2	3.9	3.9	8.0	54.7
ARGENTINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	9.5	19.5	19.5
SPAIN	0.0	0.0	0.0	0.0	22.0	0.0	0.0	22.0	0.0	0.0	2.2	2.2	0.0	5.5	0.0	5.5	29.7
PORTUGAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	5.2	5.2
TOTAL	13.3	32.4	22.0	67.7	65.9	37.9	26.1	129.9	51.7	37.4	58.7	147.8	30.2	130.2	26.4	192.0	537.4
PALM OIL																	
MALAYSIA	77.1	39.6	34.1	150.8	36.8	8.5	37.5	82.8	38.2	46.8	31.7	116.7	46.5	59.3	132.1	237.9	588.2
SINGAPORE	0.4	0.4	0.2	1.0	0.0	0.2	1.1	1.3	1.1	0.7	1.2	3.0	0.7	0.8	1.9	3.4	8.7
TOTAL	77.5	40.0	34.3	151.8	37.0	9.6	38.8	85.4	39.3	47.5	32.9	119.7	39.3	47.5	32.9	241.3	598.2
RAPESEED OIL																	
CANADA	0.0	0.0	0.0	0.0	10.0	0.0	16.5	26.5	0.0	0.0	5.9	5.9	15.4	0.0	0.0	15.4	47.8
FRANCE	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	3.3	2.3	9.4	5.4	17.1	23.4
SWEDEN	N/A	N/A	N/A	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
NETHERLANDS	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.6
FED.R.GERMANY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	3.4	3.4
TOTAL	3.0	0.0	0.0	5.1	10.0	0.0	16.5	26.5	0.0	3.3	5.9	9.2	17.7	12.8	5.4	35.9	78.3
GRAND TOTAL	93.8	72.4	56.3	224.6	112.9	47.5	81.4	241.8	91.0	88.2	97.5	276.7	87.2	190.5	64.7	469.2	1213.9

SOURCE: Trade data based on official supplier country export statistics (no shipping lag).

FOREIGN AGRICULTURAL SERVICE
OILSEEDS AND PRODUCTS

GUIDELINES TO CORPORATE HEDGING

BY WILLIAM J. JOHNSON

Introduction

Many uninformed corporate executives believe that corporate hedging is merely another form of commodity futures speculation. After all, no unique guidelines designed only for hedging can be easily found. Most hedge guidelines fit an individual corporation's own objectives. Therefore, it is difficult to produce a standard set of guidelines which apply to all firms. Based on my experience, however, one guideline can be applied universally to executives of all corporations considering the start of a hedge program: distinguish clearly between the speculator and hedger and create safeguards which prevent your hedge program from crossing over into the field of speculation.

To understand this guideline we need to explore what these two roles mean. As a starting-point, here are some questions which took me several years of experience in hedging to answer and which many corporate executives may still consider unanswered questions. For example, what are the roles of the hedger and speculator in terms of their motives? The hedger shifts his risk to the speculator who assumes that risk in hopes of a profit. It is obvious that the motive of the speculator in the futures market is to make money. Where does that leave the hedger? Doesn't the hedger also wish to make money? If not, what is the hedger's motive for being in the futures market? If it is to make money than what is the difference between the hedger and the speculator? These questions foster a skepticism about the futures markets by corporate executives who should be using them for hedging.

Understand Your Role as a Hedger

Unfortunately, the inability of the potential hedger to clearly understand the role of hedger in some cases creates an insecurity and leads to inaction. This insecurity stems from the distasteful prospect that a hedger is motivated to make money in his futures account just like the speculator. Corporate executives fear that superiors may interpret their activities as speculations and evaluate their performance based on profits from trading futures.

I contend that there is a vast difference between the hedger and speculator. The bona fide hedger strives to make money in his principal business and not necessarily in his futures account while the speculator's only interest is making profits in his futures account. If this distinction between the hedger and speculator removed the insecurities of executives confused about the roles of the two, this article would conclude at this point. Unfortunately, the term, "bona fide hedger" implies that any hedger who sets out to make money in his futures account is a "non bona fide hedger" and any profit-motivated hedger carries the stigma of speculating.

Many do not share my viewpoint concerning the role of the hedger. They state that there is only a fine line between the hedger and speculator. Moreover, they contend that the hedger is in the futures market to make money. They question any hedger's motive that does not in part include the desire to profit in the futures account.

I hope to convince you of my viewpoint: that hedging is an important tool of the corporation meant to achieve a *business purpose*, but it is not the glamorous and exciting high-stakes futures trading that many believe.

There are many business purposes achieved by hedging. Conforming to corporate strategic objectives, setting corporate plans and budgets, developing marketing strategies and achieving purchase price stability are each examples of business purposes where hedging can play a vital role.

Make Sense of Your Hedge Program

A hedge program is suitable to your business when it makes sense. The same methods used for analyzing and deciding any other business venture can be applied to hedging. Do not turn decisions on hedging over to a commodity broker who purports to be the expert in a highly technical field of futures trading and hedging. He is biased towards trading activities which generate high commissions. Furthermore, do not attempt to determine the suitability of hedging for your corporation by applying the various rules of hedging that are in existence and claimed by some to be legitimate forms of hedging. If you look hard enough, you will find a rule for every trading whim justifying the trade under the "hedge" label.

Refer to illustration 1 for a list of "hedge" activities which I have come across in my research. While some of these activities represent legitimate hedge practices in certain limited situations, mainly they have evolved into mere trading strategies. The

Illustration 1

THE HEDGE FAMILY

PURE HEDGER
ANTICIPATORY HEDGER
VARIABLE HEDGER
AGGRESSIVE HEDGER
RELATIONSHIP HEDGER
TEXAS AND/OR OKLAHOMA HEDGER
PARADOXICAL "SPECULATIVE HEDGER"
PREHEDGER
PERFECT HEDGER
IN/OUT HEDGER
CONVERSION HEDGER
SELECTIVE HEDGER
BLIND HEDGER
DYNAMIC HEDGER

There are many different rationalizations which are assigned the "Hedge" label. Insure your reasons for hedging are not merely rationalizations.

"hedge" label provides an air of respectability but any semblance to hedging is only a convenient rationalization.

Determining the suitability of a hedge program is not complicated. Nor does it have to be turned over to an "outside expert" or relegated to accommodating "rules of hedging". I offer you two simple criteria dealing with the question of suitability of a hedge program for your corporation. Both of these criteria serve to internalize your hedge program. First, does the hedge program have a legitimate business purpose and secondly, does it make sense to the business generalist with no unexplained areas which are "beyond the scope of a generalist's understanding"?

The rationalization suggested by this list of "hedge" methods contributes to the confusion and creates undue caution on the part of many corporate executives who should be hedging. I can think of no better way to illustrate the confusion and caution than to point to the most paradoxical term found in the list, namely, "speculative hedging." If you were a corporate board member or president and an executive presents to you the finer points of "speculative hedging," how would you feel about committing corporate funds to such a venture? At the very least you probably would feel confused and cautious. Do the activities suggested by this list meet the two simple criteria for your corporation? Do they have a business purpose in mind and do they make sense? If they do not, forget about the labels, rules, and experts associated with these "hedge" activities and stick with the two simple criteria.

Integrate Your Hedge Program into Entire Corporation

In order for hedging to maintain its business purpose, you should integrate it into the entire corporate machinery. The notion that a corporate futures trading operation should be structured into a "profit center" is ill-conceived. I have seen one disaster after another where the futures trading is segmented from the rest of the corporation. Consider the analogy of the acquisition of a piece of processing equipment as part of the manufacturing process, equipment which accepts raw material, processes it and forwards it on to the next stage of manufacturing. Until the equipment is placed "on-line" it is of no service to the manufacturer. Its value is obtained only when it is integrated into the entire manufacturing corporation.

Similarly, the value of futures hedging operations cannot be measured unless the operations are placed "on-line" or integrated into the entire corporate machinery. Once the integration takes place, the influence on purchasing, marketing, manufacturing and planning can be determined.

Avoid "Beat the Market" Schemes as "Profitable Hedge Strategies"

Nine of ten corporate executives involved in commodity activities discuss profitable hedge strategies in the context of making money in the futures account. The individual who confines his discussion of profitable hedge strategies to the components of the corporate income statement is rare. Evaluating futures recommendations is the responsibility of the corporate executive, not the futures broker. It is important to the corporation that the corporate executive confine his analysis of the impact of futures activities strictly to the corporate income statement. Does the advice presented by the futures broker represent a prudent course of action for the corporation? Because the futures broker generally does not have any particular insight into the inner workings of your corporation he is unable to present hedge strategies from the corporate perspective. He invariably dwells on methods of profiting in your futures account. He may assign some hedge nomenclature to his trading method in an attempt to make his recommendations more palatable to the corporate decision maker but it is not unusual for futures brokers to try to increase the velocity of trading in your account. If he is successful you are only a short step away from crossing over into the world of the speculator. The futures broker's emphasis remains on beating the market and he recommends methods which ignore the corporate objectives. Similarly, most corporate executives placed in a decision-making responsibility in futures hedging operations begin with a search for the ideal trading strategy, pausing only a moment to determine the degree of risk-exposure found in the corporation.

Assume you are a corporate executive or futures broker who is uninformed about the corporation's strategic objectives, pricing methods, or the nature of competition but can discuss in great detail the course of action that corporation should follow in the futures market. You are following a dangerous course of action based on a superficial knowledge of hedging. When you discuss the latest trading method to beat the market in order to show profits in the corporate futures account, you distract yourself from other more important considerations of hedging. For example, the question of risk exposure requires careful deliberation. Glancing over this subject will cause you to lose the proper focus for your hedge program. You will find that this article omits any discussion of trading strategies. The guidelines found in this article apply in all circumstances and not just when you show gains in your futures account.

Distinguish Between "Profits" and "Gains"

In avoiding the various "beat the market" trading methods I do not mean to suggest that the corporation will necessarily show losses in its futures account. On the contrary, I believe using the same good business practices that built the successful manufacturing, marketing, or financial functions will, in the long run, result in the successful management of a futures hedge account including net gains. After all, it is the buy and sell hedgers who *en mass* represent the demand and supply of a commodity, and prices are determined by these two factors. In the long run, this gives the hedgers an advantage over the speculators. This advantage will result in gains in the hedger's futures accounts in the long run.

Notice that I use the word, "gains" instead of the word, "profits" because "profits" fails to point out a fundamental characteristic of hedging. When commodity prices rise, the buy hedger usually gains in his futures account. Whenever a gain occurs in a futures account there is an offsetting loss in some other corporate account. This account is likely to be the "cost of ingredients" account. Perhaps the loss is an expense over budget. When the futures gains are integrated into the "cost of goods sold" account with the over-budgeted cost of ingredients, the net result shows no profit; only gains in one account offset by losses in another account. Any financial gain is expended at the point that the raw materials are purchased. The results in your futures account tend to be opposite to the results which you experience when buying actual ingredients.

Of course, there are profits in a corporation, but they have little to do with futures transactions. You might suspect that when you have gains in your futures account they are brought down to the bottom line and increase profits. This is not the case. In fact, more often the opposite takes place: Futures account results and corporate profits tend to go in opposite directions. There are several reasons for this. First, and perhaps the most obvious, corporations are often not fully hedged. When the corporation is long futures the equivalent of 25% of the annual requirements of raw materials, for example, and experiences a gain in its futures account due to higher commodity prices, a drop in earnings is likely. Since 75% of the raw material requirements are not hedged, there is no price protection for the majority of the year's requirements as commodity prices rise. The proper perspective of executives of a user corporation which takes a 25% buy hedge position is to hope they are wrong. They have established a partial hedge against higher prices but not a full hedge. Therefore, they should recognize that they are better off losing money in their hedge account and experiencing lower prices.

Another reason for the tendency of futures gains and corporate profits to move in opposite directions is the general trend in inflation. A manufacturing corporation tends to base price increases of finished goods on estimated costs. If the manager of the purchasing department over-estimates the impact of inflation for the upcoming year, his budget is easier to meet. When corporate plans are designed and implemented at the beginning of a fiscal year, they include plans for one or two price increases justified by the estimates of higher raw material costs. If the eventual inflation rate is considerably less than the original estimate, all costs, not just the costs of commodities traded on the futures exchanges will be lower than the budgeted costs and corporate profits will increase.

The deflationary pressures which are depressing the inflation rate are at the same time creating bear markets for commodity prices. Bearish pressure occurred in 1984 and the beginning of 1985 for several reasons including lower petroleum prices, lower exports caused by the high dollar exchange rate, tight monetary controls by the Federal Reserve Board and favorable growing conditions for the country's major crops. With few exceptions prices for hard commodities trended down during this period. Manufacturing firms which hedge by going long in the futures likely lost in futures but their corporate profits increased. Remember, I am referring to "user" corporations which hedge their short positions by buying futures for price protection.

The inverse relationship between futures performance and corporate profits applies to "producer" corporations but these corporations are sell hedgers because they are producers, not users of commodities. For example, when Black & Decker, Inc. buys copper contracts to hedge its copper usage, it will stand to benefit if inflation rates drop. Considering the significant drop in the inflation rate, it is no wonder that Black & Decker reported record earnings even though it seems likely that if its executives did buy hedge their copper requirements they lost money in their futures account since copper prices have been in a down trend for some time. Many of the costs of manufacturing a household tool will drop or at least not go up as fast as originally expected when the plans and budgets were being prepared. These costs include energy costs to run its plants, steel costs to manufacture casings, and labor costs. Profits will rise even if losses occur from buying copper futures contracts.

On the other hand, Phelps Dodge Corporation has seen red ink for the last two years as the inflation rate and copper prices fell. Phelps Dodge Corporation is not a user corporation which is a buy hedger. It produces copper and is therefore a sell hedger. A sell hedger in a falling market gains in its futures account but will experience lower profits or even net losses in its income. Thus, the inverse relationship between futures performance and corporate profitability holds true for sell hedgers as well as buy hedgers.

One additional point should be made concerning the inverse relationship between futures account performance and corporate profits. The residual effect of a bear or bull market on subsequent corporate income is an important consideration for long term planning. Even if a corporation was fully hedged, that is, futures coverage equal to a full year's raw material requirements, it might still be better if prices fell and losses developed in the futures account.[1] Consider the opposite. If prices rise, gains will develop in the futures account. Those gains offset higher raw material purchase prices. However, the residual effect of a bull market on the hedger is higher costs the following year when the offsetting effect to higher costs wears off. Since the average life of a consumer product is many years it is obvious that falling or stable raw material prices enhance profitability. Rising prices have a long term negative effect on profitability even if hedged for as long as a year.

In many respects hedging is like a fire insurance policy. But I dislike the analogy since obtaining a fire insurance policy is expected of a corporate executive while implementing a hedge program remains regrettably an exception to normal business practices. Nevertheless, comparing a hedge to a fire insurance policy points out one important similarity. Executives obviously prefer avoiding catastrophic losses of corporate assets through fire, and find little solace in receiving a financial settlement from an insurance policy for the loss. The loss of the destroyed asset represents a loss in subsequent earnings potential. A hedge program generates a similar feeling. Rising raw material prices also represent a loss in subsequent earning potential after the price protection of a hedge is absorbed. A relatively short term gain by virtue of a long position in the corporate futures account does not fully offset the impact of rising costs.

Know the Difference Between a Hedger and Speculator

Many years ago, a successful futures broker told me that commodity trade recommendations for speculators are not necessarily appropriate for a hedger. He went on to say that sometimes the opposite is true. A bullish price outlook for a commodity means a buy recommendation to a speculator; however, given the same price outlook, a sell recommendation might be appropriate to a hedger. I couldn't believe this. I was at a point in my futures career where trade recommendations had to conform to price outlooks. I believed that anyone who was bullish could not have any justification for selling a commodity. It took years of subsequent experience for me to fully comprehend the wisdom of this apparent paradox.

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[1] While the phase, "fully hedged" suggests something very specific, it is not a formal term used by the futures industry to describe some specific situation. However, for the purposes of this discussion, "fully hedged" is considered to be a hedge position equivalent to one year's raw material requirements.

Now I understand the difference between the speculator and hedger and accept that it is possible to recommend to a hedger selling a commodity even though you think prices are going to rise. Exactly why does the difference between a speculator and a hedger exist? Let's examine the underlying reasons. First, while both are profit-oriented, the speculator hopes to make this profit directly through his futures account. The hedger hopes to make his profit through his principal business. This may be farming, manufacturing, or exporting. Here, the futures account is only indirectly involved as a tool in the profit objective.

The futures account is the principal vehicle for profits for the speculator and a secondary tool of the hedger. It is a serious mistake to believe that a hedger's futures activity is the center of profitability, while other business activities such as purchasing, manufacturing or marketing are only secondary. Beware of the advisors who disregard this difference between the hedger and the speculator and treat both similarly.

The second difference between the hedger and speculator pertains to their objectives. A bullish price outlook obviously leads to a buy recommendation to the speculator, subject to proper money management techniques. But consider the farm producer whose objective is to get a bank loan. Because he is a producer he is long the cash commodity and therefore a sell hedger. (A farm producer is not technically long farm products until those products are harvested. I will examine this in the next section.) As a sell hedger he stabilizes revenues at a sufficient level to pay back a bank loan, enhancing his credit worthiness. Even though the price outlook is bullish, this hedger is selling in his futures account, enabling him to receive the bank loan and proceed with making a profit in his principal business, farming. Without the sell hedge, revenues may not be stable enough to appease the banker, thus jeopardizing the loan. The bank may not be inclined to issue the loan or may issue it at a higher interest rate.

Recognize that Hedging Locks in Half the Profit Equation

We know that a buy hedge stabilizes costs but do stable costs help a corporation? Sometimes, not. There are circumstances where stable costs can hurt the corporation. I have seen very little research concerning the impact of stable costs on a corporation's profitability. For most, stable costs imply stable profits and for some stable costs suggest higher profits. These conclusions are not always true. Buy hedging will stabilize costs but in some cases stable costs can have an adverse effect on profitability.

Illustration 2

THE HEDGE EQUATION

Variable Invoice Costs ± Equal & Opposite Futures Outcome = Stable Costs

Buy hedging results in an adjustment to the actual purchase price of raw materials which are variable. Although invoice prices vary, the equal and opposite position in the futures market tends to offset the variances. This produces a stabilizing effect on costs.

To illustrate the influence of stable costs on profitability let's first consider two simple equations; the hedge equation, and the profit equation. Through the interaction of these two equations, you can evaluate the influence of stable costs on profits.

The hedge equation states that invoice costs of ingredients are variable but when combined with an equal and opposite position in the futures markets will become more stable. Refer to illustration 2. If a gain occurs in the futures hedge account, it offsets higher costs of purchasing ingredients. A loss in the futures account offsets the benefits of lower cost ingredients. Therefore, gains or losses in the futures account by themselves do not represent higher or lower profits.

The profit equation found in illustration 3, states that sales revenues minus costs equal profits. Both the hedge and the profit equations include "costs" as a common variable so the two equations can be combined. When I combine them the results on profits vary from company to company and industry to industry. More importantly, stabilizing costs can have a de-stabilizing effect on profits, which is undesirable.

To illustrate the various outcomes of combining the arts of corporate profit making and corporate hedging, think about the corporate pricing mechanism. In some industries a particular corporation is regarded as the industry's leader in setting prices. R. J. Reynolds in the cigarette industry, Ralston Purina in the dry dog food industry, M & M Mars in the candy industry and General Foods in the coffee industry are examples of price leaders. These companies generally set wholesale prices for their products before others in the industry change their prices. They typically base their pricing decisions on estimates of changes in costs. Other companies in these industries wait for the industry price leaders to change price before they follow. They are called the price followers.[2]

When a price leader hedges and stabilizes the purchase price of raw materials it stabilizes one component of the wholesale price of its finished product. If commodity prices fall, the industry price leader is in no particular danger since that company can maintain its wholesale price based on higher raw material costs stabilized through hedging. Is the same true of the price follower? When a price follower stabilizes

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[2] I am generally referring to price leaders increasing prices although consumer goods corporations occasionally lower prices. For more information refer to my article in the *1982 Commodity Yearbook* which discusses M & M Mars increasing their candy bar size while holding their prices steady, effectively lowering candy prices.

Illustration 3

THE PROFIT EQUATION

Sales Revenues − Costs = Profits

Corporate profits are determined by two major factors; sales and costs. Stabilizing one of these factors through hedging, may not necessarily stabilize profits.

raw material costs through futures hedging, does it stabilize profits? The answer is no. To understand how I arrived at this answer review the combined profit/hedge equations. Hedging diminishes the price volatility of raw materials. However, the prices of finished products are variable because the price follower will follow the price leader in order to stay competitive. Therefore, the profit equation for the price follower begins with variable sales revenues. Hedging makes costs stable. When stable costs are subtracted from variable sales revenues, the result is variable or unstable profits. Refer to illustration 4.

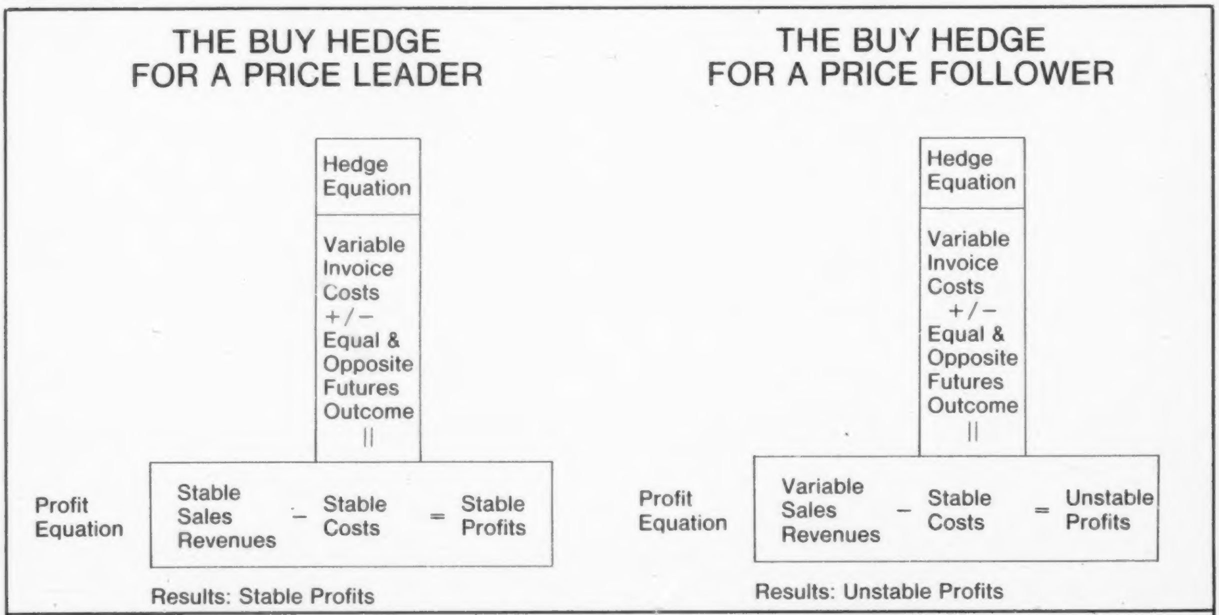
I conclude that it is not advisable for a price follower to hedge unless that corporation knows that the price leader is also hedging or unless it is prepared for greater swings in profitability.

Discussing the industry's price leader and followers is an appropriate application in the consumer goods industries, but can the profit/hedge equations be applied to other industries? Is the same application of the equations also valid in the consumer goods industries where there is no clear price leader and where members perceive that they must be competitive with the general market rather than one particular company? I maintain that the application of the equations is valid in all cases, including sell hedgers as well as buy hedgers. For instance, the farm producer has stable costs but does not know his sales revenue since the prices of harvested grains will be determined when they are sold at some future date. When he sell hedges he stabilizes sales revenues. Matching stable sales revenues with stable costs produces stable profits as depicted in illustration 5. Before the hedge program was implemented sales revenues and hence profits were unstable. On the surface, this is an acceptable hedge. In the next section, I will discuss another aspect of this example which casts some doubt on the stability of costs in this case.

What is important here is understanding how the hedge and profit equations are applied to determine if profits are more stable or less stable as a result of hedging.

Now, let's consider the manufacturing corporation which manufactures and sells a product in an extremely competitive market. This corporation prices its product on a cost-plus basis. Raw material costs are unstable but so are its sales revenues. When costs rise so do sales prices and when costs drop so do sales prices, although at a slower rate in all but the most competitive environments. Profits are relatively stable as the corporation maintains a relatively stable profit margin. I have heard this pricing method referred to as "pop" pricing which is short for *pro*cessing, *o*verhead and *p*rofit. It represents every cost *except* raw materials. What happens to the profits when the corporation buy hedges its raw material

Illustration 4


THE BUY HEDGE FOR A PRICE LEADER
Hedge Equation
Variable Invoice Costs +/− Equal & Opposite Futures Outcome ||
Profit Equation
Stable Sales Revenues − Stable Costs = Stable Profits
Results: Stable Profits
THE BUY HEDGE FOR A PRICE FOLLOWER
Hedge Equation
Variable Invoice Costs +/− Equal & Opposite Futures Outcome ||
Profit Equation
Variable Sales Revenues − Stable Costs = Unstable Profits
Results: Unstable Profits

Here are two different corporations, one a price leader and the other a price follower. Both corporations hedge, resulting in stable costs. However, only the price leader experiences stable profits. The price follower experiences unstable profits and therefore fails to establish a legitimate corporate purpose.

Illustration 5

THE SELL HEDGE FOR A FARM PRODUCER

Variable
Sales
Revenues
+/−
Equal &
Opposite
Futures
Outcome
||
Stable Sales Revenues − Stable Costs = Stable Profits

Results: Stable Profits

The farm producer stabilizes his sales revenues through hedging resulting in stable profits.

costs? The answer is that profits become unstable. Granted, the raw material costs are stabilized through the buy hedge but what about sales revenues? In an extremely competitive industry the corporation cannot afford to be overpriced. If it buy hedges and commodity prices drop, the fierce competition forces wholesale prices down and this corporation is forced to follow. To stay at a premium price will result in a loss of market share and a drop in profits. Similarly, profits will erode when it lowers wholesale prices to stay competitive because raw material costs were hedged at higher levels. Here is an excellent example of hedging destabilizing profits as shown in illustration 6.

Of course, commodity prices can also go up after a buy hedge is established. The competition will raise prices in response to higher costs, cost increases which the hedged firm did not incur. So hedging in a competitive market with cost-plus pricing is not all bad. Sometimes it results in a decrease in profits, but sometimes it results in an increase in profits. However, if your objective is stable profits and you cannot accurately anticipate the sale price of your finished products, I suggest that you cautiously approach a commodity hedge program designed to stabilize your costs. Remember, locking in half of your profit equation does not in itself guarantee a successful hedge program. The suitability of a hedge requires you to look at the entire profit equation.

Illustration 6

MANUFACTURING CORPORATION IN A COMPETITIVE MARKET

Before Hedging

Variable Sales Revenues − Variable Costs = Stable Profits

After Hedging

Variable
Costs
+/−
Equal &
Opposite
Futures
Outcome
||
Variable Sales Revenues − Stable Costs = Unstable Profits

Hedge Results: Unstable Profits

Here the "Hedge" destabilizes profits.

Determine How Long or Short You Really Are

The farm producer who sell hedges his grain production is regarded by many to be the classical example of a hedger, but in my opinion, this example is flawed because the farm producer assumes he has an unhedged "long position" prior to the grains being harvested. If grain prices fall while his crop is growing, he will lose sales revenues. This is a valid problem for the farmer.

The solution—sell hedge or establish a short position equal and opposite his long position—will introduce new risks and it is not a valid hedge. How long is the farmer? Does planting seeds in the spring constitute a "long" position for him? A harvested crop stored in an elevator is a long position but how do we know that a planted crop will be harvested? Suppose a drought, blight or some other occurrence prevents the farmer from harvesting his entire crop. If the occurrence is widespread, many farmers will be adversely affected and the national supply outlook for grains will diminish. Prices follow the economics of supply and demand, and will rise. Where does this leave the sell hedger? For example, if he plants enough acreage for an expected 1,000,000 bushel corn crop and sell hedges that same quantity at a price of, let's say, $2.00 per bushel, isn't there a new risk based on being over-hedged? When a growing problem reduces crop yields over a wide area, grain prices will surely go up, perhaps to $2.50. If the farmer loses part of his crop and he harvests only 800,000 bushels, the sales price has effectively been stabilized at $2.00 per bushel on this quantity, not the 1,000,000 bushel expected based on plantings at the beginning of the season.

But his sell hedge was based on the 1,000,000 bushels of corn he estimated to harvest. So he sold 200,000 bushels more in his hedge account than he actually has to sell in the cash markets after the harvest. To make matters worse, an over-hedged position caused by some unpredictable event, such as a drought, almost always puts the farmer on the wrong side of price movements. In this example prices rose 50¢ per bushel and the farmer had a 200,000 bushel short position in his futures account without a corresponding long position in the cash market. He lost $100,000 in addition to stabilizing revenues for his corn at $2.00 in a rising market. Illustration 7 is a summary of the financial outcome under these circumstances.

This is a fairly simple example of how miscalculations in your long position cause problems with your hedge program. Commodity brokers have a standard response to this problem. "Hedge only a certain per-

Illustration 7

CORN PRODUCER'S SELL HEDGE
(Where producer experience crop damage due to drought)

		Total Revenues
SPRING		
HEDGE IS PLACED		
Sell 1,000,000 bushels of futures @	$2.20	
Expected basis difference	−.20	
Expected price to be received	$2.00	$2,000,000
FALL		
CORN HARVESTED		
(20% of crop lost to drought)		
(Corn prices rose 50¢/bushel)		
Sell 800,000 to an elevator @	$2.50	
Lift (buy back shorts) corn futures @	2.70	
Basis difference	−.20	
HEDGE RESULT		
1,000,000 bushels of futures sold @	$2.20	
1,000,000 bushels of futures bought @	2.70	
Loss	($.50)	
800,000 bushels cash corn sold @	$2.50	$2,000,000
Loss in futures	(.50)	($500,000)
Net revenues received on 800,000 bushels		$1,500,000
Average priced received by farm producer	$1.87½	

Here is a sell hedge which attempts to lock-in farm revenues at $2.00 per bushel for corn production. However, a drought reduced the crop yield. The farm producer is over-hedged in a rising market. This results in revenues dropping to $1.87½ per bushel.

centage, for example, 80% of your estimated production," they say. That certainly solves the problem and I completely agree with them. I express the same concept in a more general way. "Use some common sense," is my way of putting it. Let's rethink the question of how long or short you really are.

Selling futures to offset the farm producer's "long" position is the essence of hedging. Here the position in the futures markets is *equal* but opposite the position he has in the cash market. In the above case the farm producer cannot determine his long position, so how can he take an *equal* short position in his hedge account?

The anticipatory hedger expects his short position to be at a certain level so he buys futures to offset the risk of rising prices. All manufacturing corporations which *use* commodities are anticipatory hedgers when they go long in their hedge account. Exactly how short are they in the cash market? How do they determine how long they should be in their futures account? You as a business executive are forced to make assumptions which determine the extent of your short cash position. These assumptions deal with a time frame selected arbitrarily at 6 months, 1 year, or more than 1 year, and the estimate of sales of finished goods during that time frame. Only after making these assumptions can you calculate how much of a raw material you are short. Recognize that the assumptions about time and sales levels induce the calculated short position and hence the long hedge position you establish in the futures market. Avoid manipulating the assumptions in order to change your calculated short position based on your price outlook. For example, if you become very bullish about prices you could decide to change the time frame of your short position from 6 months to one year. This change would mean that your short position doubled. Now you can go long twice the volume of futures contracts. I am not saying that you should not change your assumptions used to derive your calculated short position, but make sure that you have a solid business purpose for making the change. "I now want to hedge against one year's short position because prices are 15% below my budget for the year and at these price levels record earnings should result," is an example of a solid business purpose.

While the farm producer with an unharvested crop is a sell hedger and the manufacturing corporation which requires raw materials in the future is a buy hedger, they can both be regarded as anticipatory hedgers. They are both assuming vital variables which in turn determine their risk, and hence, their hedge position. The farmer assumes how long he is and the manufacturing executive assumes how short he is.

Since there are other considerations beyond simply determining net risk, you might also rethink what is to be done in the hedge account once you determine how long or short you are. It is generally believed that hedging is used to neutralize or at least reduce risk, but I have seen hedgers use the futures markets to *stabilize risk*—not costs—at its current level. As an example, I often cite the successful farmer who plants enough acreage in the spring to produce 100,000 bushels of corn each year. Starting in the summer, he surveys his acreage and estimates his final production. He is unique in the use of his hedge account in that he sets his net exposure to 100,000 bushels, not zero as most would assume. If his survey estimates that his final production will be 80,000 bushels instead of the 100,000 for which he planted, he *buys* 20,000 bushels in his hedge account. If his estimate is for 120,000 bushels, he sells 20,000 bushels in his hedge account. He uses his futures account to maintain a net exposure at the 100,000 bushel level. "Quite frankly," he says, "I am not interested in eliminating risk. If I wanted that, I would get out of this business."

Here the application of a little common sense results in a farm producer going long the futures markets under certain conditions. While this violates every known rule about producer sell hedging, it often puts this producer on the right side of the market. When a drought reduced his crop and prices were rising, he was buying in the futures market. When excellent growing conditions produced a bumper crop and prices were dropping, he was selling in the futures markets. His hedge activity was based on production expectations, not price outlooks. All in all, he usually was on the right side of the market, and I for one am not inclined to argue with success.

Do Not Rationalize Trading When Hedging.[3]

I shudder at the naivete of the "commodity professional" who looks at a price chart in retrospect and asserts that the corporate buy hedger should simply wait for the price to stop dropping and then buy hedge the corporate requirements as soon as the prices start up. "This practically guarantees," he asserts, "that the buy hedger will buy close to the bottom of the market."

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[3] *Futures, The Corporate Proxy*, by William J. Johnson in 1981 for Merrill Lynch, Inc.

"What happens" I ask, "if you find out that prices are not at the bottom of the market after you buy hedge?" "That is not a problem," he explains, "because futures hedge positions are flexible and you can always sell them."

In fact, a great deal of imagination and rationalization often go into the strategies. "If you buy futures to hedge," he points out, "and the market starts to drop, you can sell your long futures position and benefit from the lower prices." This one statement contains a multitude of fundamental errors.

The corporate executive and futures broker can avoid the pitfalls found in this statement by recognizing these errors. Let's review this statement in parts, and I'll point out 4 errors:

1. "If you buy futures to hedge. . ." A known purchase price without a known selling price is not a hedge. A part-time hedger is not a hedger at all. If a corporate executive buys one year's requirement of commodities on a particular day in order to "hedge" the market, I have to ask him what he was doing the day before the purchase. The likely answer is that he was waiting and hoping for lower prices, prices at which "hedging can begin." A speculation on the appropriate time to hedge is still a speculation, not a hedge. The missing element that would make this a hedge is the proper emphasis on the business purpose and a corresponding de-emphasis on price forecasting.
2. ". . . the market starts to drop . . ." Knowing beforehand when a market starts to do anything presupposes that the participant knows what price level it will reach. When a commodity price goes down slightly and then takes off on the up side, it is termed a temporary correction. Great effort goes into determining when the market is reversing its price direction versus when it is merely making a temporary correction. I find it unreasonable to expect anyone to know when a market is turning down until after the fact when it is too late.
3. ". . . you can sell your long futures position . . ." There are many reasons why a hedger succeeds in commodity futures. In whatever form or shape it takes, the greatest reason for his success is an appreciation for the basic value of the underlying commodity. When a speculator buys a commodity at a price, let's say $150 per ton, he typically places a sell stop either in his mind or on the floor of the exchange.[4] If he is wrong about the trade and the market continues down below $150, he sells his long position and looks for another trade. On the other hand, hedgers purchase the same commodity on behalf of the corporation because it provides the corporation with value. The $150 per ton price level is a good value in terms of the company objectives. Unlike the speculator who sells if the market goes against him, the hedger recognizes that if $150 is good value, then $130 is a better value and then he buys additional contracts.
4. ". . . and benefit from lower prices." The futures trader who buys futures then sells them because they are going down locks in his loss. That loss will be with him to be absorbed into the income statement regardless of the subsequent price move of the commodity. If commodity prices go up after the loss is established, the corporation is facing a higher cost of goods sold and a surcharge for the cost of inventory based on futures losses. For example, if he buy hedges at $200 and sells at $190 because he believes prices are continuing down, he has locked in a $10 surcharge. If prices go up to $225 by the time he must buy the inventory, he pays the higher price and must add $10 to that price resulting in a cost of $235. A whip-saw market which causes a corporate executive to buy and sell several times, locks in several losses. However small each of these losses are, they become a political burden on him and a formidable argument in favor of suspending futures trading.

I advise corporate executives to carefully study every hedge position they are considering, review in advance all possibilities and keep in mind their business purpose. If the business purpose is long term in nature, decide that your hedge position is also long term. If you feel that you must liquidate to cut your losses in the event futures prices begin to drop, you have a short-term futures position trying to achieve a long-term business purpose. Don't do it. If this is a possibility, don't begin a hedge program. You may be lucky once or twice but eventually prices are going to go against you. You will be whip-sawed out of your position and left unhedged in a rising market while absorbing several futures losses.

Give Proper Credit to Cost Savings as a Vital Part of Profits

Based on dealings with corporate executives, I realize that many top managers believe a hedge account is unnecessary because, in their minds, the key to profits is sales increases, not cost controls. With the typical gross profit margin of a consumer goods product in the 30 to 40% range, high marketing and sales costs are vital to generate increased sales. Many executives believe very little can be done to eliminate most increases in costs, including ingredient price increases. At best higher sales volumes and prices compensate for these unavoidable cost increases.

"Advertising or special promotions are justified because high gross margins contribute so greatly to profits," says the marketing or sales manager. However, if higher sales do not materialize after spending large sums of money on advertising and promotions, this individual asks the manufacturing or purchasing departments why costs are so high, making the corporation's products non-competitive. He asserts that the product must be priced too high making it non-competitive. Since pricing is based on costs, they imply that costs are too high. I have found many more executives who believe that sales volumes are more important to the financial health of the corporation than its cost controls. To a great extent this stems from the current presidents and other top managers who were formerly sales and marketing managers. I have found that this is not a consistent belief among chief executive officers who were formerly finance managers.

A close look at some of the consumer goods corporations where this misconception exists reveals some interesting points. Sales volumes are relatively stable when compared to the volatility of raw material costs, particularly costs of ingredients which are traded on the futures exchanges. Increases in sales volumes are not that easy to come by and are very expensive to achieve. Hence, the profitability of sales increases must be weighed against the cost of achieving them. Furthermore, sales increases are most likely at the expense of the competition and are generally short term in nature. The competition increases its marketing and sales expenses to bolster its sales volume when it discovers that its market share is slipping.

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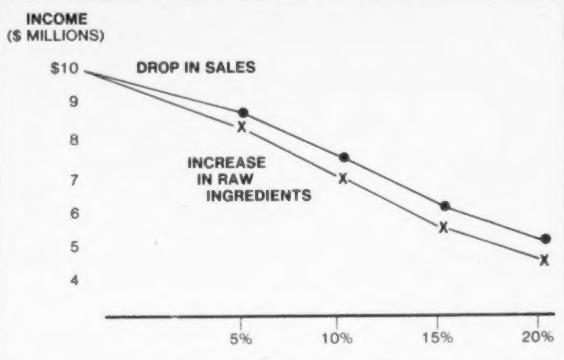
[4] A sell stop is an order to sell a futures contract when it reaches a specific price which is below the current market price. This is a way of automatically liquidating a long position when prices are going down, but the trade is subject to the availability of a buyer in the futures pit.

Top managers whose backgrounds were sales and marketing battle the competition on a sales and marketing front and believe that the path to profitability is higher sales volume. Often they fail to fully appreciate the significant contribution obtainable through the purchasing function. A very constructive role can be developed in the relationship between the purchasing and marketing departments relating to futures operations. One very simple benefit of this relationship is the advice the purchasing department can give the marketing department based on the seasonal price changes. Marketing can then time its promotions based on periods when raw material prices are at their lowest seasonal level.

Illustration 8 represents two income statements each with a different scenario. I emphasize that they are hypothetical and are meant to demonstrate the relative impact on earnings by changes in costs versus changes in sales. On the top half of the illustration a $100 million corporation calculates the drop in income for every 5% drop in sales. At a 20% drop in sales the income has fallen to $4.6 million, a drop of almost 55%. Lower gross margins are experienced because of a loss of efficiency in plant operations. Net income dropped even further due to fixed expenses, as well as the profit lost on $20 million less sales.

The bottom half of the illustration depicts the same corporation. In this scenario, the sales price and volume are held constant, but the ingredient portion of the costs of goods sold is increased in 5% increments. While plant efficiencies remain the same at constant sales volumes, the total cost of goods sold increases $6 million at a 20% increase in ingredient costs.[5] The drop in net income is more severe than in the case of the lost sales volume. At a 20% increase in ingredient costs income drops 59% compared with a 55% drop in income when sales fell 20%.

Illustration 9 Impact on Income of 20% Drop in Sales vs 20% Increase in Raw Ingredients



Net income shown on the vertical scale falls faster as ingredient prices increase compared to sales decreases.

Illustration 9 shows the impact on income of both rising ingredient costs and falling sales volume. If your main efforts as a corporate executive have been in the area of sales growth without an appropriate concern for costs, the chart shows why you may want to rethink corporate objectives. When you place the proper emphasis on costs, the use of a hedge program will appear more useful to the corporation. In any event, the notion that growth in sales is more important than controlling ingredient costs is false. By bal-

Illustration 8 ABC Consumer Goods Manufacturing Co. Statement of Estimated Income (*In Millions of Dollars*)

SALES	COST OF GOLD SOLD	GROSS MARGIN	DISTRI.	BROKERS COMMISSION	ADVERTIS.	PROMOT	PROMOTION INCOME	FIXED OVERHEAD	NET INCOME
ESTIMATE BASED ON DROP IN SALES AT 5% INCREMENTS									
100	60	40	12	4.5	6.4	3.9	13.2	3	10.2
95	57.7	37.3	11.4	4.3	6.1	3.7	11.8	3	8.8
90	55.4	34.6	10.8	4	5.8	3.5	10.5	3	7.5
85	53.2	31.8	10.2	3.8	5.4	3.3	9.1	3	6.1
80	51	29	9.6	3.6	5.1	3.1	7.6	3	4.6
ESTIMATE BASED ON INCREASE IN RAW INGREDIENTS AT 5% INCREMENTS									
100	60	40	12	4.5	6.4	3.9	13.2	3	10.2
100	61.5	38.5	12	4.5	6.4	3.9	11.7	3	8.7
100	63	37	12	4.5	6.4	3.9	10.2	3	7.2
100	64.5	35.5	12	4.5	6.4	3.9	8.7	3	5.7
100	66	34	12	4.5	6.4	3.9	7.2	3	4.2

When sales levels drop, net income also falls at a faster rate as indicated in the top half of this illustration. When costs increase, net income falls even faster. Refer to the bottom half of the illustration.

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[5] The ingredient costs referred to in this example are those commodities which are traded on the futures exchange. They represent 30% of the sales dollar before any price increases. After a 20% increase in these items, the relationship increases to 36% of each sales dollar.

ancing both facets financial performance can be stabilized.

Conclusion—Train All Involved Managers

A continual training course results in a successful hedge program while the lack of a training course invites costly mistakes. Frequently I see cases where top managers interested in delegating authority inadvertently instill confusion and anxiety into the lower level managers who are assigned the responsibility of carrying out the hedge program. This results from top managers not participating in on-going training. The worst offender, in my opinion, is the corporate president who places the manager in charge of hedging operations in a no-win position.

"Sell our long futures position if you think prices are going down," the president instructs, "but don't sell if you think prices are going up."

How can the lower level manager do his job when he receives such ambiguous instructions from his president? Based on the instructions, the minute prices start to fall he should liquidate the corporation's long position, but if he thinks prices are going to rise again he might wait for a rebound. If instead prices continue to fall he is violating the president's instructions although his actions are based on his own judgment about prices. After all, using his judgment seemed to be what the president wanted when he issued the instructions. A multimillion dollar loss occurred where the president issued very similar instructions because commodity prices dropped dramatically in just a couple of weeks. When it was all over the manager in charge of hedging said that he was just using his judgment. Meanwhile the president had assumed that the position was liquidated based on his instructions.

A training program teaches the president to avoid these types of instructions. It also teaches the lower level manager not to accept these instructions even from the corporate president or other superiors. When the president participates in the training and understands that his managers are being taught to defend themselves against ambiguous or unworkable instructions, he will not react negatively to the manager who presses the president for clarification of instructions.

Training programs are forums where presidents who may unintentionally issue ambiguous instructions learn that they do not absolve themselves of responsibility for an out-of-control hedge program simply by saying that a manager didn't follow instructions.

Likewise, training programs are forums where subordinates learn that they have been given the responsibility for management of the hedge program for reasons other than their trading acumen. He learns that the president should not, and generally does not, expect him to beat the market but rather to carry out clearly defined corporate objectives.

A comprehensive training program should not be limited to the top manager and the manager responsible for the hedge program. Because futures operations impact the entire corporation, managers from all affected departments should be familiar with the basic mechanics of hedging. Once they know what futures contracts are, and what they can do, they will be in a position of contributing intelligent ideas on how to employ them. Furthermore, the results of hedging will be better accepted when they are understood and endorsed by affected managers in various departments.

Corporate objectives dictated by the top manager or hedge manager may lack the detail needed for a smooth operation and a complete integration of the futures activities into the entire corporation. Conversely, well thought-out plans which allow for input from all managers and are approved by the top manager result in specific authority to conduct specific hedging operations to accomplish specific objectives. Discipline to carry out those operations replaces imaginative rules, creative rationalization and improvisation, i.e., making up the "plan" as you go along.

Developing discipline is the most important aspect of your training efforts. It is difficult to achieve with training, but without proper training any discipline built into your hedge program at its inception will quickly break down under day to day pressures.

While managing a futures hedge program, it is a good idea to review the guidelines frequently so that they are always a part of your decisions. Make common sense of your hedge program. If it starts getting complex, step back and take a hard look at why that is happening. Integrate your hedge program into the entire corporation. If you feel like you want futures to be your own profit center or if you are being allowed to do your own thing in futures, something is seriously wrong with the program. Don't get caught up in "beat the market" schemes. They are disasters waiting to happen. Know the difference between "gains" and "profits" in your corporation. *Don't speculate!*

These guidelines are certainly not all-inclusive but if followed will start a corporation's hedge program in the right direction. All involved will know what is expected of them and will feel that their performance will be evaluated on the basis of how effective they are in meeting corporate objectives.

ANALYSIS OF THE CFTC COMMITMENTS OF TRADERS REPORTS CAN HELP YOU FORECAST FUTURES PRICES

BY WILLIAM L. JILER

As a student of commodity market analysis some 35 years ago, I recall my teacher, the late Victor Lea of the New York Institute of Finance, saying that commodity price forecasting would be simple if we only knew who was buying and selling futures contracts, and why. The U.S. Department of Agriculture (USDA) tried to partially address this problem by issuing a report roughly categorizing open interest positions. For many years, The Commodity Exchange Authority of the USDA issued a monthly publication entitled "Commitments of Traders Reports" which broke down month-end open interest of "Reporting" (Large) and "Non-Reporting" (Small and/or Foreign) traders. The statistical tables in the report indicated how open interest is allocated among large hedgers and speculators. And, by subtracting large traders' commitments from total open interest, the positions of small traders (both speculative and hedging) are also derived and presented in tabular form. In 1976, the new Commodity Futures Trading Commission (CFTC) continued these reports, and expanded them to include markets not previously covered, as well as new active futures markets. Because of computer and budgetary problems, the reports were discontinued from January 1982 through November of that year. The reports were resumed in February, 1983 to include statistics for December of 1982, and again expanded to cover the dynamic new financial futures markets.

At COMMODITY RESEARCH BUREAU (CRB), we developed techniques to utilize these statistics, and found them to be a valuable aid in the technical forecasting of futures price movements. The original research of approximately 23 years ago has not been significantly altered, and appears to be valid for the markets of the 1980's. The pertinent statistics have been gleaned from these reports and published in tabular format as a regular feature of the CRB FUTURES CHART SERVICE. These statistics are continually analyzed, and when they provide important clues to futures trends, the findings are published in the "Technical Comments" section of the weekly publication.

We will try to describe how these "Commitment" reports are analyzed and used to help forecast futures prices. We will also present the basic charts that can help you utilize the same techniques for "do-it-yourself" forecasting.

"Commitments of Traders" Reports

The official CFTC report is scheduled for release on the 11th day of each month, or the next business day if the 11th is a Saturday, Sunday or holiday. There are a number of terms used that require further explanation that will aid in your understanding of the report. Open interest refers to the number of futures contracts that have been entered into and not yet liquidated or fulfilled by delivery. A purchase of one contract, when balanced by a sale of one contract, is considered as a total of one open interest contract. A "Reporting" (large) trader is one who holds or controls a position in any one future of a commodity on any one contract market equaling or exceeding the quantities established by the CFTC as a reporting level; e.g. in March 1985 the reporting level of wheat, corn and soybeans was 500,000 bushels. In the tables, "OLD" refers to old-crop futures based on marketing seasons. In spreading, "ALL" futures in each commodity includes each trader's long and short positions without regard to which crop year/calendar year or market is involved. It is very important to note that because of intermarket spreading, long and short spread positions in a given futures market will not be equal. This causes confusion because percentage figures usually do not add up to exactly 100%. For your examination, a copy of a recent table on soybean open interest appears in figure 1.

Over the years, there have been adjustments in reporting requirements. For example, a number of changes were made as recently as Dec. 5, 1984, when reporting levels were raised for 19 out of 27 U.S. futures traded. Among the largest increases were Stock Index futures, raised from 100 to 300 contracts and T-Bonds from 150 to 300 contracts. Soybean oil, soybean meal, sugar and copper were raised from 100 to 150 contracts. These changes were made to reflect increased trading activities and should not distort the historical value of the statistics.

The CFTC has also continuously expanded the number of markets covered. Although they are not new markets, statistics for copper and gold were finally added starting with December, 1982 figures. While a two-year history of monthly positions may not prove to be a reliable benchmark of normal positions, we have found them to be particularly helpful in following recent market action. We are showing charts of these commodities in this article for future study.

To show how we use the government report to compile our open interest statistics, we refer you to the soybean table in figure 1, exactly reproduced from the February 1985 CFTC "Commitments of Traders" report. We used the figures under "Percent of Open Interest Represented By Each Category of Traders," and the "ALL" line from the first column. You will note that Commercials (Large Hedgers) were long 32.7% and short 39.1%. This indicated that they were net short 6.4% at the end of February.

In figure 2, we reproduced the Open Interest table from our weekly CRB Futures Chart Service, which shows how we presented all the statistics from the February 28, 1985 "Commitments" reports. Under soybeans, we rounded off the percentage figures from the official report to 33% long and 39% short. This made the net short figure 6%. We also showed the change from the previous month of +18%, indicating that they had increased their net long position by 18% (The actual number went from −24% to −6%). From the Non-Commercial Reportable Positions, we get the Large Speculators position. You will note the net position of −5% derived from Long or

Short Only column in figure 1. The Small Traders statistics are from the Non-Reportable Positions.

Long Term End-Month Average Positions

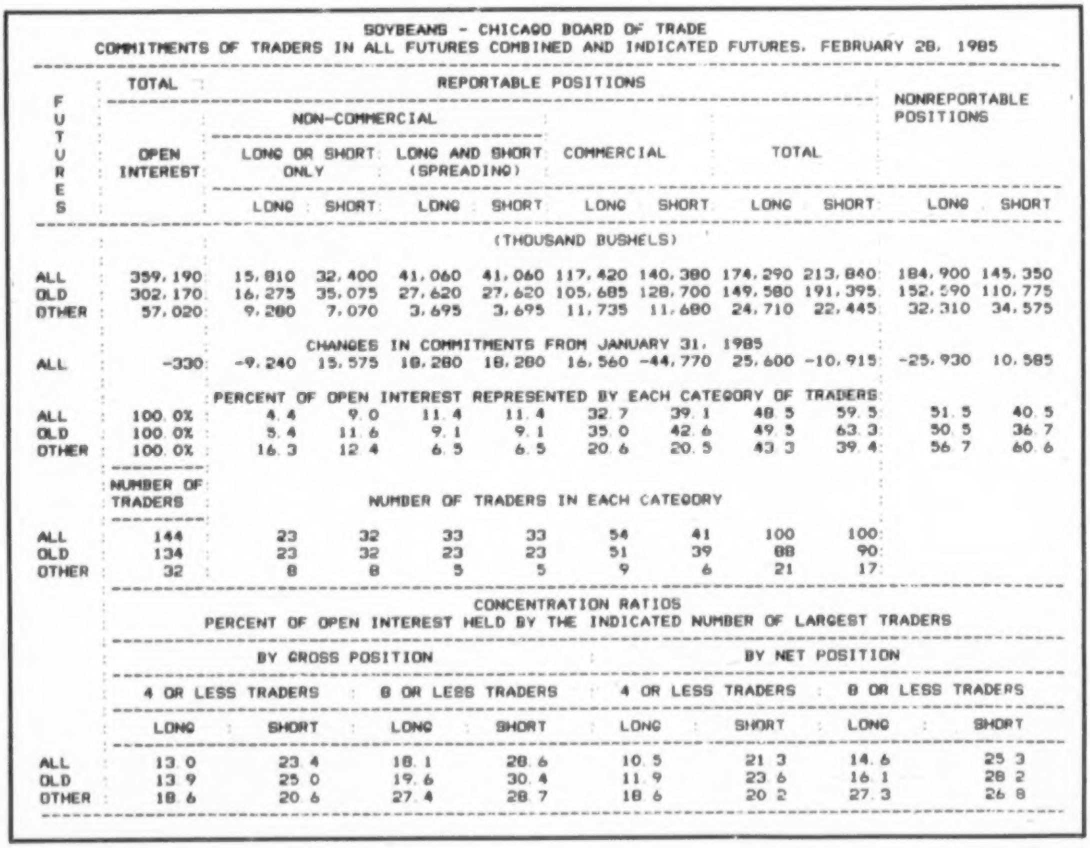
Now we come to the very important long term end-month average or seasonally normal positions for each major category of open interest. These studies, presented in chart format at the end of the article, are the key to the analysis of the "Commitments" reports. Without a thorough knowledge of the average or normal open interest configuration, reported positions do not have much meaning. The charts will make this article invaluable for understanding the monthly reports and should have long-lasting use. We've been updating these averages for over 20 years, and surprisingly, the basic configurations do not change much for those markets with a 5 or 6 year history. Those few markets with only two or three years of history may prove to be a different story. They should be viewed with some suspicion, and updated as new statistics are received.

The Forecasting Methodology

Basically, we tried to determine the "forecasting" performance of the major identifiable groups of market participants—Large Hedgers, Large Speculators, and Small Traders. It was logical to assume that the larger and more sophisticated traders should have market insights that would enable them to predict futures price movements, if not infallibly, at least more accurately than the small traders who presumably included the "uninformed public." We also thought it was possible that the sizes of the various market positions, at different times, could well result in a type of self-fulfilling prophecy.

From the statistics in the "Commitments if Traders" report, we were able to approximate the net positions at the end of each month for Large Hedgers, Large Speculators, and Small Traders. We averaged their month-end statistics over a number of years to find out what their normal positions would be at any given time of the year. We then compared each group's actual position with their so-called normal position. Whenever their positions deviated materially from the norm, we took it as a measure of their bullish or bearish attitude on the market.

Figure 1



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                                SOYBEANS - CHICAGO BOARD OF TRADE
       COMMITMENTS OF TRADERS IN ALL FUTURES COMBINED AND INDICATED FUTURES, FEBRUARY 28, 1985
-----------------------------------------------------------------------------------------------------
      :  TOTAL   :                      REPORTABLE POSITIONS                        :
  F   :---------------------------------------------------------------------------: NONREPORTABLE
  U   :          :           NON-COMMERCIAL            :               :           : POSITIONS
  T   :          :-------------------------------------:               :           :
  U   :  OPEN    : LONG OR SHORT : LONG AND SHORT : COMMERCIAL      :   TOTAL     :
  R   : INTEREST :     ONLY      :  (SPREADING)   :                 :             :
  E   :          :---------------------------------------------------------------------------------
  S   :          :  LONG : SHORT :  LONG : SHORT :  LONG    SHORT  :  LONG   SHORT :  LONG   SHORT
-----------------------------------------------------------------------------------------------------
      :          :                        (THOUSAND BUSHELS)
      :          :
ALL   :  359,190:  15,810  32,400  41,060  41,060 117,420 140,380 174,290 213,840: 184,900 145,350
OLD   :  302,170:  16,275  35,075  27,620  27,620 105,685 128,700 149,580 191,395: 152,590 110,775
OTHER :   57,020:   9,280   7,070   3,695   3,695  11,735  11,680  24,710  22,445:  32,310  34,575
      :          :
      :                 CHANGES IN COMMITMENTS FROM JANUARY 31, 1985           :
ALL   :     -330:  -9,240  15,575  18,280  18,280  16,560 -44,770  25,600 -10,915: -25,930  10,585
      :          :
      :         :PERCENT OF OPEN INTEREST REPRESENTED BY EACH CATEGORY OF TRADERS:
ALL   :  100.0% :     4.4     9.0    11.4    11.4    32.7    39.1    48.5    59.5:    51.5    40.5
OLD   :  100.0% :     5.4    11.6     9.1     9.1    35.0    42.6    49.5    63.3:    50.5    36.7
OTHER :  100.0% :    16.3    12.4     6.5     6.5    20.6    20.5    43.3    39.4:    56.7    60.6
      :---------:
      :NUMBER OF:
      :TRADERS  :            NUMBER OF TRADERS IN EACH CATEGORY                  :
      :---------:
ALL   :   144   :      23      32      33      33      54      41     100     100:
OLD   :   134   :      23      32      23      23      51      39      88      90:
OTHER :    32   :       8       8       5       5       9       6      21      17:
      -----------------------------------------------------------------------------------------------
      :                            CONCENTRATION RATIOS
      :         PERCENT OF OPEN INTEREST HELD BY THE INDICATED NUMBER OF LARGEST TRADERS
      -----------------------------------------------------------------------------------------------
      :           BY GROSS POSITION                 :            BY NET POSITION
      -----------------------------------------------------------------------------------------------
      :   4 OR LESS TRADERS   :  8 OR LESS TRADERS   :  4 OR LESS TRADERS   :  8 OR LESS TRADERS
      -----------------------------------------------------------------------------------------------
      :     LONG  :   SHORT   :    LONG  :   SHORT   :    LONG  :   SHORT   :   LONG  :     SHORT
      -----------------------------------------------------------------------------------------------
ALL   :     13.0       23.4        18.1       28.6        10.5       21.3       14.6         25.3
OLD   :     13.9       25.0        19.6       30.4        11.9       23.6       16.1         28.2
OTHER :     18.6       20.6        27.4       28.7        18.6       20.2       27.3         26.8
-----------------------------------------------------------------------------------------------------
```

By studying subsequent price movements, we were able to establish "track records" for each of the groups. As anticipated, we found that Large Hedgers and Large Speculators had the best forecasting records, and the Small Traders the worst, by far. We were somewhat surprised to find that the Large Hedgers were consistently superior to the Large Speculators. However, the predictive results for the Large Speculators varied widely from market to market.

The differences between their current net open interest position and the seasonal norm supply us with a tangible percentage measure of the degree of bullishness or bearishness of each group towards a particular market to a certain extent. From these "net-net" figures, we obtain a configuration of market attitudes of the principal players. From our research and long experience we have drawn up some general guidelines:

> *The most bullish configuration would show large hedgers heavily net long more than normal, large speculators clearly net long, small traders heavily net short more than seasonal. The shades of bullishness are varied all the way to the most bearish configuration which would have these groups in opposite positions—large hedgers heavily net short, etc. There are two caution flags when analyzing deviations from normal. Be wary of positions that are more than 40% from their long-term average and disregard deviations of less than 5%.*

Figure 2

COMMITMENTS OF TRADERS—LARGE HEDGERS, SPECULATORS AND SMALL TRADERS

Open Interest Positions Shown in Percent (Rounded) as of February 28, 1985

	LARGE HEDGERS				LARGE SPECULATORS				SMALL TRADERS			
MARKETS	Long	Short	Net	△	Long	Short	Net	△	Long	Short	Net	△
Cattle (Live)	26	42	-16	-5	4	8	-4	-13	66	46	+20	+18
Cocoa	81	78	+3	+24	6	5	+1	-9	11	15	-4	-13
Coffee	70	63	+7	+30	4	9	-5	-30	24	26	-2	-1
Copper	35	72	-37	+4	9	5	+4	-4	53	21	+32	-2
Corn	60	46	+14	+14	1	9	-8	-4	38	43	-5	-9
Cotton	56	30	+26	+7	4	19	-15	-3	38	50	-12	-5
Crude Oil (N.Y.)	79	41	+38	+3	7	32	-25	-7	13	27	-14	+3
Gold (Comex)	72	43	+29	+13	3	13	-10	-2	16	35	-19	+12
Heating Oil #2	58	47	+11	+8	18	8	+10	+13	23	44	-21	-21
Hogs	8	11	-3	+2	20	17	+3	-5	64	64	0	+3
Leaded Gas (N.Y.)	63	75	-12	-3	8	2	+6	+6	29	23	+6	-4
Lumber	20	29	-9	+12	10	12	-2	-1	69	58	+11	-10
Orange Juice	55	50	+5	+33	6	9	-3	-3	34	36	-2	-29
Platinum	58	77	-19	+7	14	6	+8	-3	27	16	+11	-4
Pork Bellies	12	11	+1	+5	26	21	+5	+2	43	49	-6	-7
Silver (Comex)	50	54	-4	+9	6	11	-5	-6	36	26	+10	-3
Soybeans	33	39	-6	+18	4	9	-5	-7	52	41	+11	-10
Soybean Meal	56	27	+29	+15	2	13	-11	-5	30	48	-18	-10
Soybean Oil	43	41	+2	+7	9	1	+8	-1	44	54	-10	-6
Sugar "11"	36	69	-33	-3	16	4	+12	+1	46	25	+21	+3
Wheat (CHI)	33	31	+2	+23	3	13	-10	-11	57	49	+8	-13
Wheat (K.C.)	67	56	+11	-2	*	2	-2	+5	29	39	-10	-4
Wheat (Minn)	61	50	+11	+18	0	0	0	0	39	50	-11	-18
Euro $	69	63	+6	+4	3	9	-6	-3	23	23	0	-1
T-Bills (90 Days)	56	49	+7	+27	8	4	+4	-9	29	39	-10	-18
T-Bonds	63	50	+13	+7	6	13	-7	+1	24	29	-5	-7
T-Notes	77	63	+14	+14	3	11	-8	-12	13	19	-6	-3
NYSE Composite	17	30	-13	+3	36	30	+6	+3	44	36	+8	-4
S&P 500	35	44	-9	+3	19	16	+3	+7	46	39	+7	-10
Value Line	1	18	-17	-13	22	31	-9	-11	72	47	+25	+23
British Pound	55	39	+16	+14	11	24	-13	-16	31	35	-4	+2
Deutsche Mark	40	61	-24	+26	25	10	+15	-11	31	22	+9	-14
Japanese Yen	36	31	+5	-10	21	33	-12	+4	42	35	+7	+5
Swiss Franc	36	47	-11	+15	22	15	+7	+4	36	32	+4	-20

How the Technique Is Used in Technical Analysis

Technical analysis for the purpose of price forecasting is the study of market action. Our definition of market action includes price, volume and open interest changes. There are many practitioners of technical analysis who use all varieties of charts, mathematics, oscillators, cycles and computer techniques. We also try to cover all aspects of technical anaylsis; however, our preliminary tools are bar charts showing high, low, close, and total volume. A line chart depicts total open interest. The "Commitments of Traders" reports are an extension or elaboration of open interest.

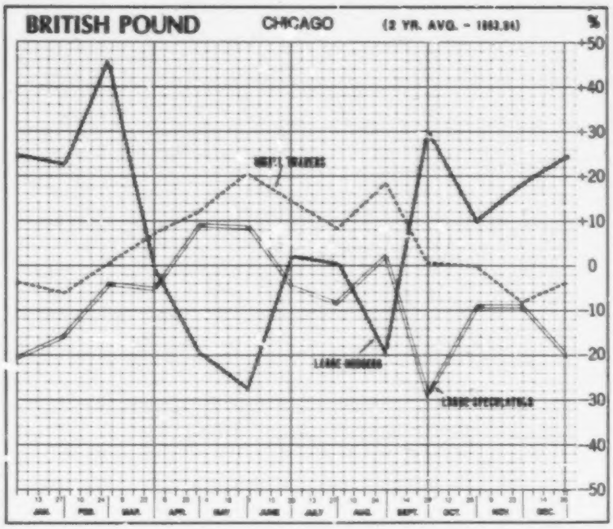
Although the analysis of these open interest statistics is a secondary technique, we have gained increasing respect for its validity as a forecaster of major price swings. It has helped us to anticipate turning points in the market, as well as confirming chart analysis and avoiding whipsaws.

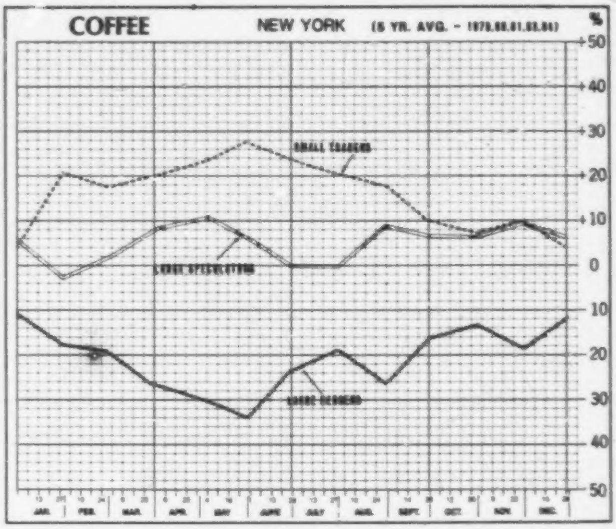
We'd like to present some examples of how we utilized this open interest analysis in our "Technical Comments" section of the CRB Futures Chart Service. In late August of 1983, we turned bearish on sugar when it was over 10¢ a pound. Throughout 1983 and 1984, we advocated a bearish stand even though prices had dropped below 4¢ to 16-year lows. An important reason for our doggedness, in addition to the bearish chart, was our analysis of the "Commitments" report. For over two years, the Large Hedgers' average net short position was over 20% larger than their previous 6-year average. Small traders, despite tremendous losses, averaged almost 20% higher net long positions throughout the entire debacle.

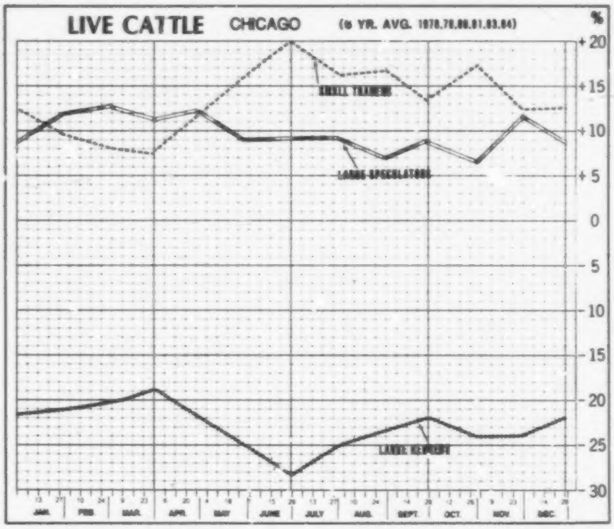
In August of 1983, Chicago wheat futures soared to new contract highs. The charts were very bullish, which we acknowledged in our "Comments" of August 12, 1983. However, we noted that the latest "Commitments of Traders" report sounded a negative note. Large Hedgers were 36% net short and Small Traders were 24% net long, both way over their 10 year averages at that time. Subsequently, the market topped out and prices trended lower for the next 6 months.

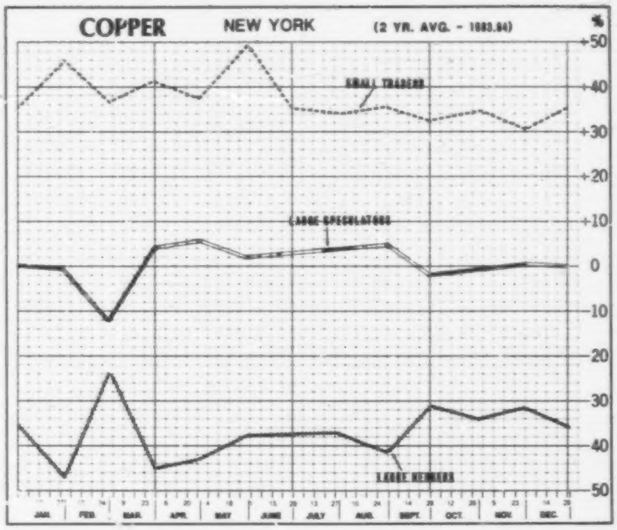
A study of the open interest configuration for corn and soybeans just prior to their spectacular bull move in the summer of 1983 will show how the analysis "did" and "didn't" work. It worked for corn, which showed Large Hedgers with net long positions well above normal and Small Traders net short. This bullish pattern was just the opposite of the soybean open interest. Here, Large Hedgers were heavily net short and Small Traders had a net long position of 20% versus a more normal 10% for June. Yet, both commodities enjoyed similar bull moves. An unforeseen drought that summer probably accounted for the strange results.

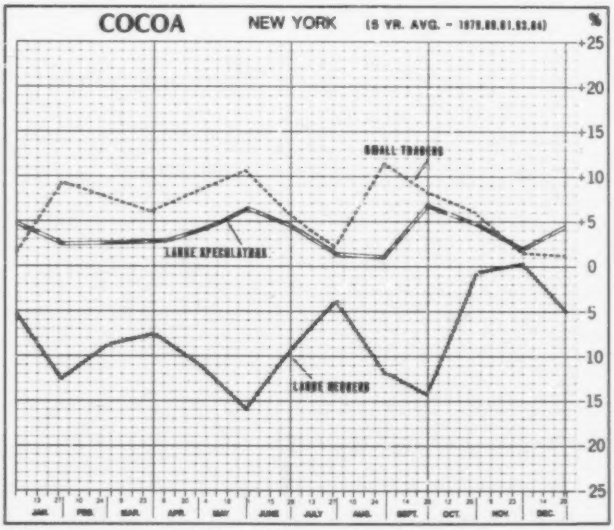
While we have shown only some relatively recent examples of this kind of open interest analysis, our experience with the technique goes back over two decades. The performance patterns are fairly consistent. Yet, we have to admit that there were exceptions that proved to be quite dramatic. Therefore, it is important also to utilize other available technical and fundamental tools to arrive at a high probability of success in forecasting prices. The nature of the events that shape price trends of futures contracts should keep even the most proficient of technical and fundamental analysts on their guard and flexible at all times. International developments, weather, and politically-motivated legislation are among the unpredictable forces that can change the direction of the markets in an instant. There is no master key that can unlock all the doors to successful price forecasting. Nevertheless, we believe that the proper interpretation of the "Commitments of Traders" reports is valuable and belongs on the analyst's key ring.

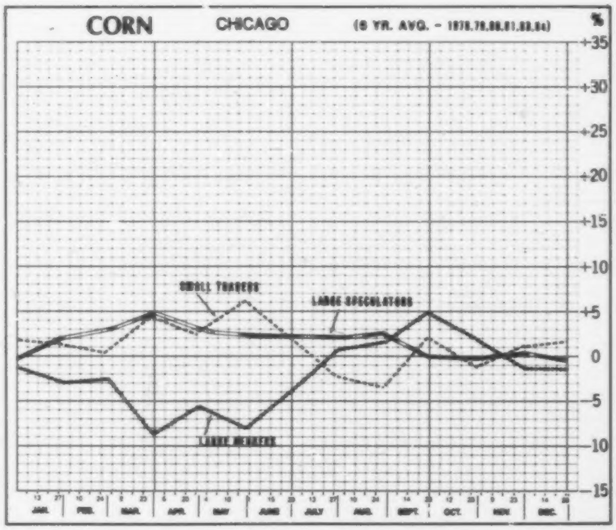

BRITISH POUND
CHICAGO
(2 YR. AVG. - 1983.84)
%
+50
+40
+30
+20
+10
0
10
20
30
40
50
SMALL TRADERS
LARGE HEDGERS
LARGE SPECULATORS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

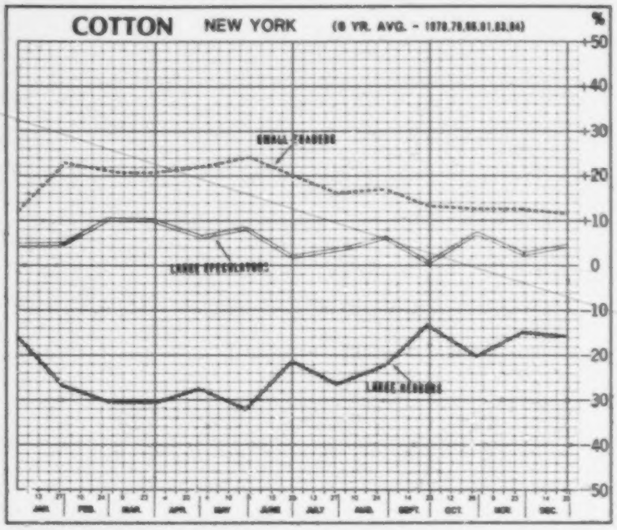

COFFEE
NEW YORK
(5 YR. AVG. - 1979.80.81.83.84)
%
+50
+40
+30
+20
+10
0
10
20
30
40
50
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

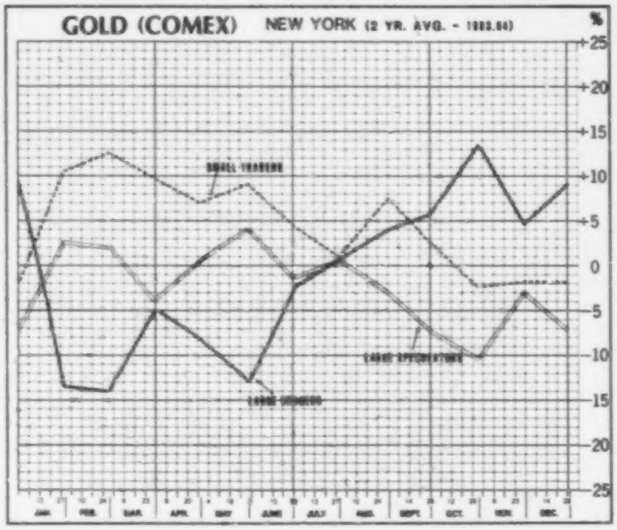

LIVE CATTLE
CHICAGO
(6 YR. AVG. 1978.79.80.81.83.84)
%
+20
+15
+10
+5
0
5
10
15
20
25
30
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

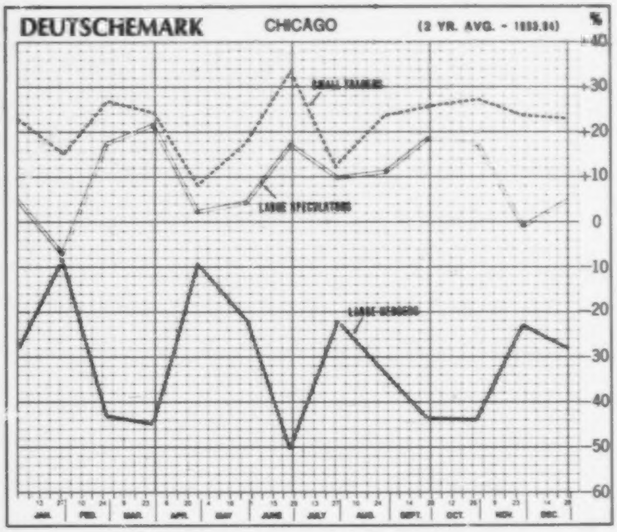

COPPER
NEW YORK
(2 YR. AVG. - 1983.84)
%
+50
+40
+30
+20
+10
0
10
20
30
40
50
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

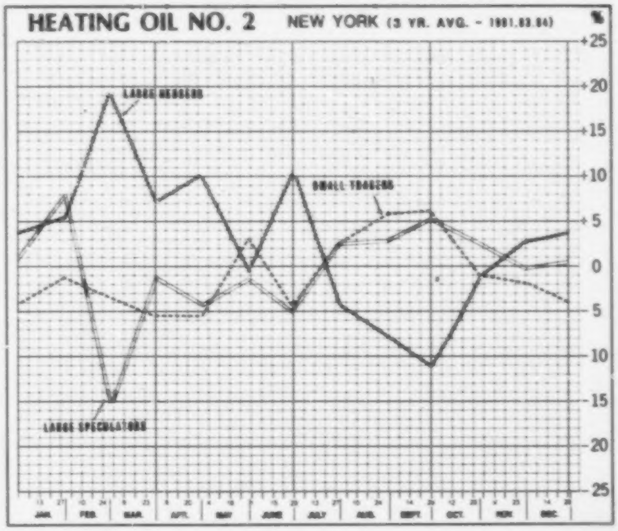

COCOA
NEW YORK
(5 YR. AVG. - 1979.80.81.83.84)
%
+25
+20
+15
+10
+5
0
5
10
15
20
25
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

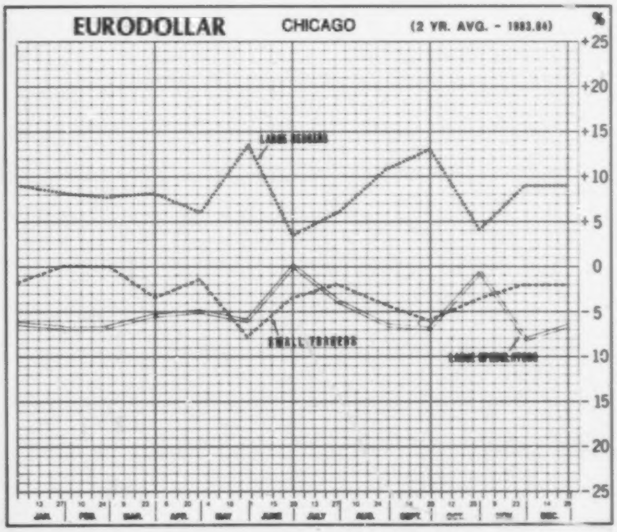

CORN
CHICAGO
(6 YR. AVG. - 1978.79.80.81.83.84)
%
+35
+30
+25
+20
+15
+10
+5
0
5
10
15
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

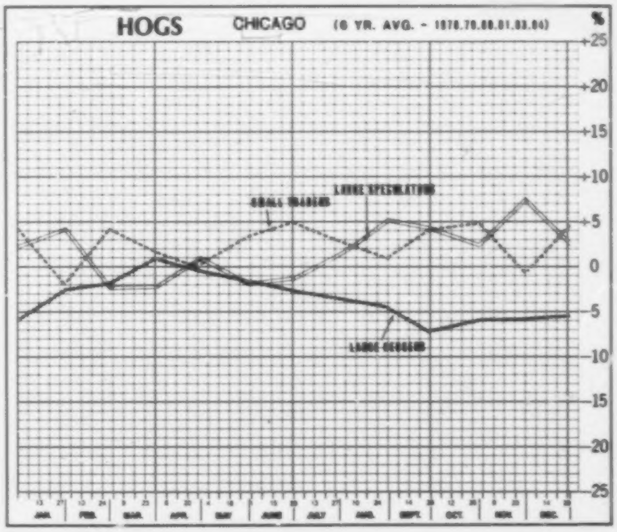

COTTON
NEW YORK
(6 YR. AVG. - 1976.79.80.81.83.84)
%
+50
+40
+30
+20
+10
0
-10
-20
-30
-40
-50
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

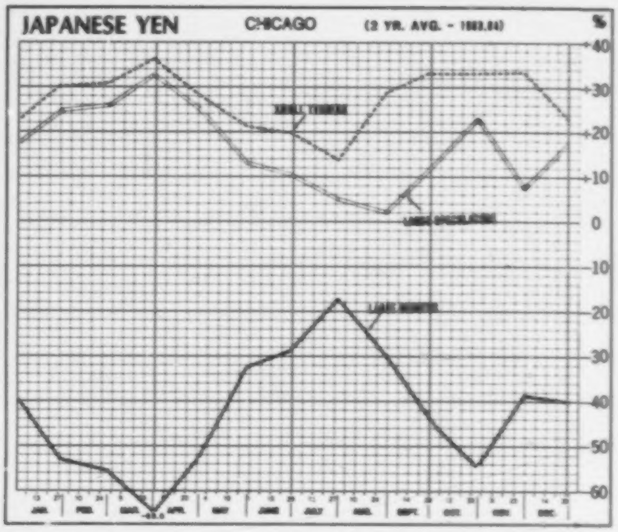

GOLD (COMEX)
NEW YORK
(2 YR. AVG. - 1983.84)
%
+25
+20
+15
+10
+5
0
-5
-10
-15
-20
-25
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

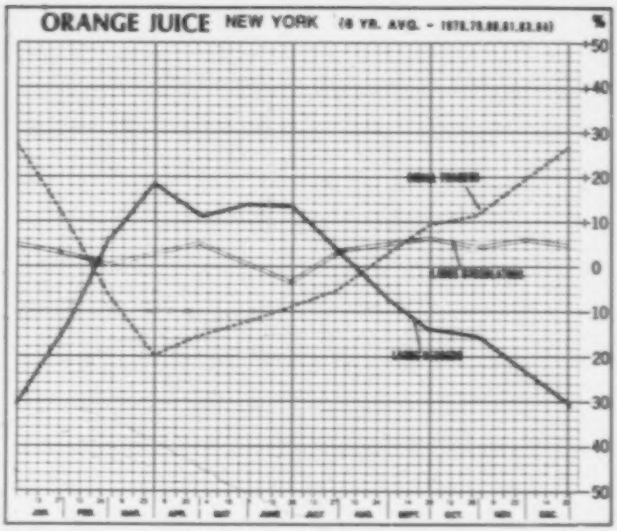

DEUTSCHEMARK
CHICAGO
(2 YR. AVG. - 1983.84)
%
+40
+30
+20
+10
0
-10
-20
-30
-40
-50
-60
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

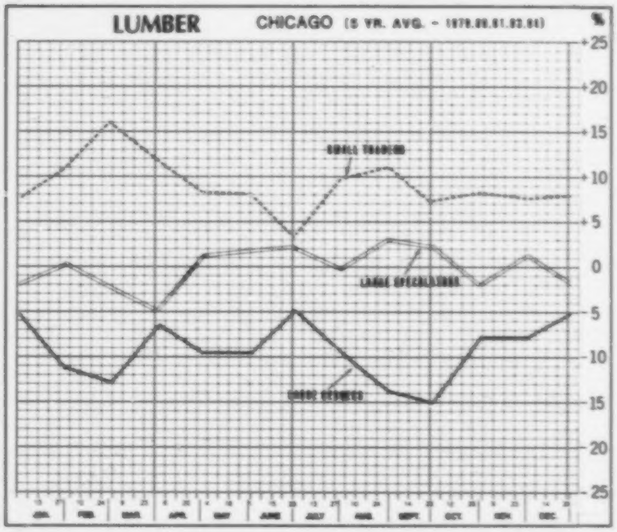

HEATING OIL NO. 2
NEW YORK
(3 YR. AVG. - 1981.83.84)
%
+25
+20
+15
+10
+5
0
-5
-10
-15
-20
-25
LARGE HEDGERS
SMALL TRADERS
LARGE SPECULATORS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

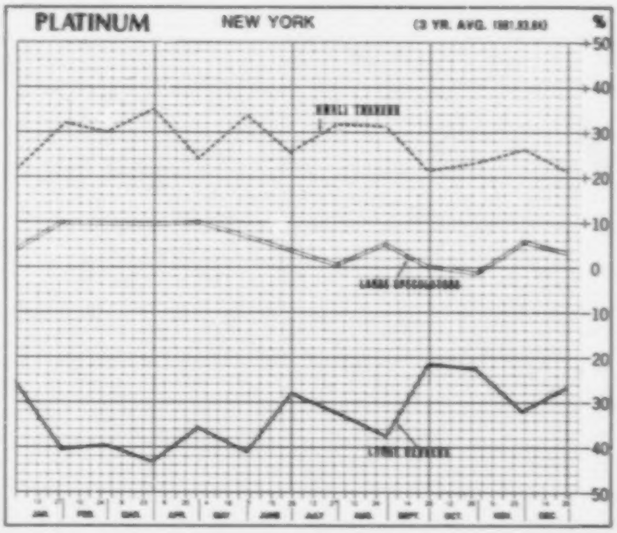

EURODOLLAR
CHICAGO
(2 YR. AVG. - 1983.84)
%
+25
+20
+15
+10
+5
0
-5
-10
-15
-20
-25
LARGE HEDGERS
SMALL TRADERS
LARGE SPECULATORS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

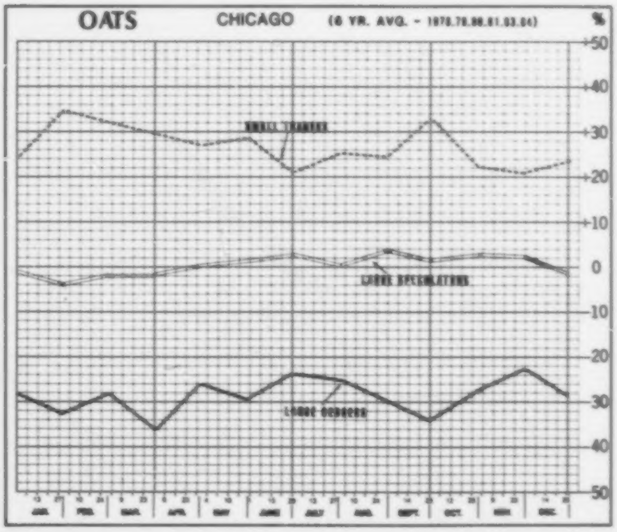

HOGS
CHICAGO
(6 YR. AVG. - 1976.79.80.81.83.84)
%
+25
+20
+15
+10
+5
0
-5
-10
-15
-20
-25
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

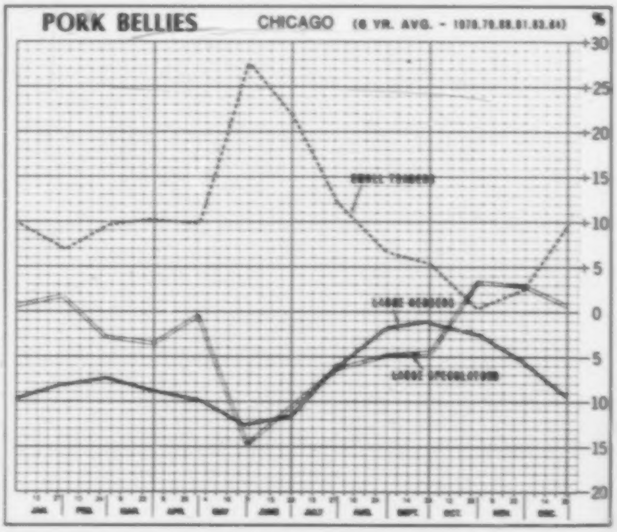

JAPANESE YEN
CHICAGO
(2 YR. AVG. - 1983.84)
%
+40
+30
+20
+10
0
-10
-20
-30
-40
-50
-60
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

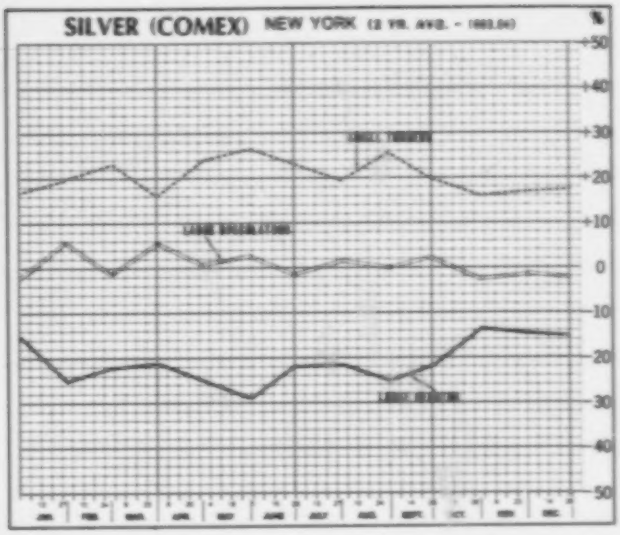

ORANGE JUICE
NEW YORK
(6 YR. AVG. - 1978.79.80.81.83.84)
%
+50
+40
+30
+20
+10
0
-10
-20
-30
-40
-50
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

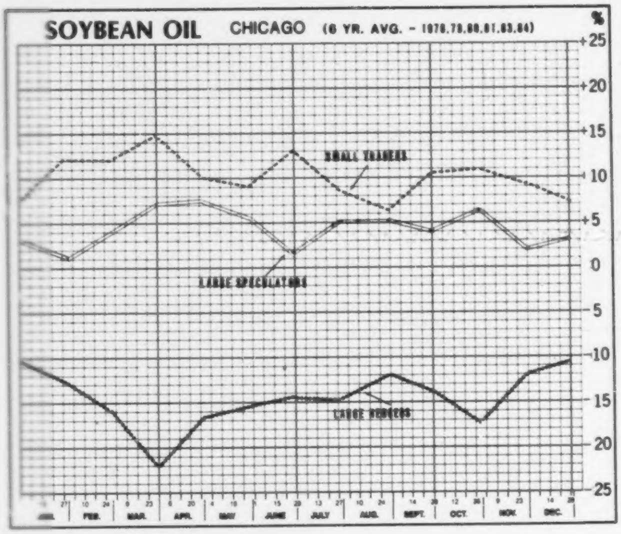

LUMBER
CHICAGO
(5 YR. AVG. - 1979.80.81.83.84)
%
+25
+20
+15
+10
+5
0
-5
-10
-15
-20
-25
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

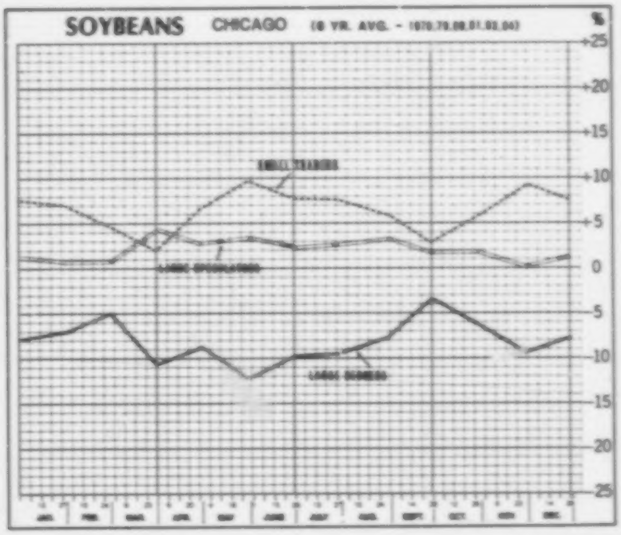

PLATINUM
NEW YORK
(3 YR. AVG. 1981.83.84)
%
+50
+40
+30
+20
+10
0
-10
-20
-30
-40
-50
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

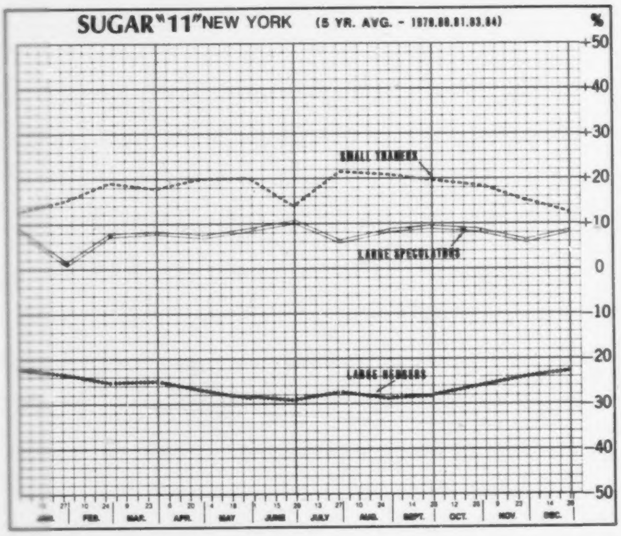

OATS
CHICAGO
(6 YR. AVG. - 1978.79.80.81.83.84)
%
+50
+40
+30
+20
+10
0
-10
-20
-30
-40
-50
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

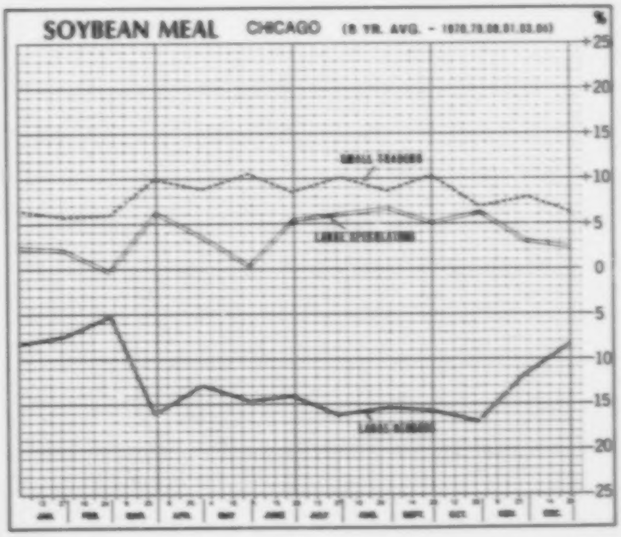

PORK BELLIES
CHICAGO
(6 YR. AVG. - 1978.79.80.81.83.84)
%
+30
+25
+20
+15
+10
+5
0
-5
-10
-15
-20
SMALL TRADERS
LARGE HEDGERS
LARGE SPECULATORS
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

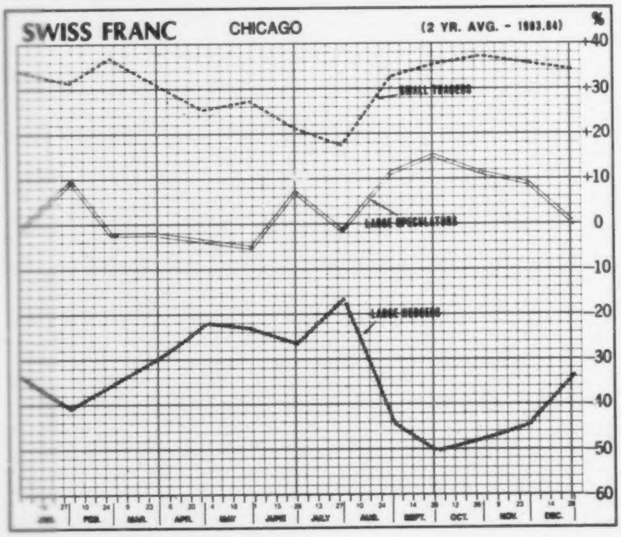

SILVER (COMEX) NEW YORK (2 YR. AVG. - 1983,84)
%
+50
+40
+30
+20
+10
0
-10
20
30
40
50
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

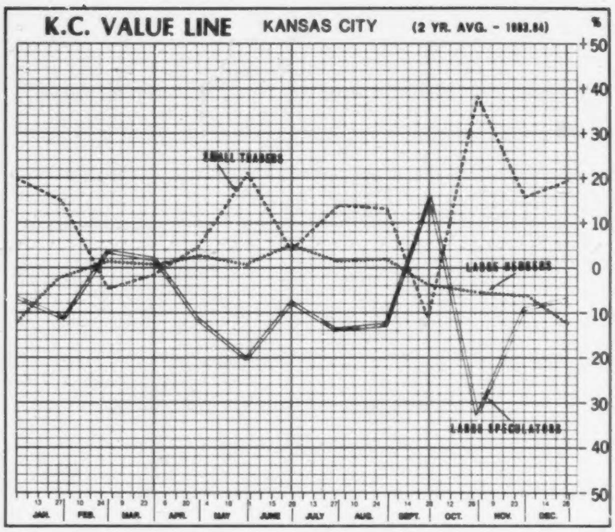

SOYBEAN OIL CHICAGO (6 YR. AVG. - 1978,79,80,81,83,84)
%
+25
+20
+15
10
+5
0
5
-10
15
20
25
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

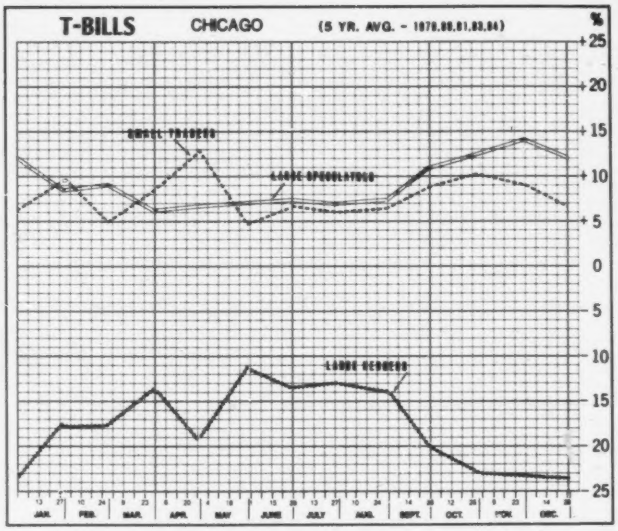

SOYBEANS CHICAGO (6 YR. AVG. - 1978,79,80,81,83,84)
%
+25
+20
+15
+10
+5
0
-5
-10
-15
-20
-25
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

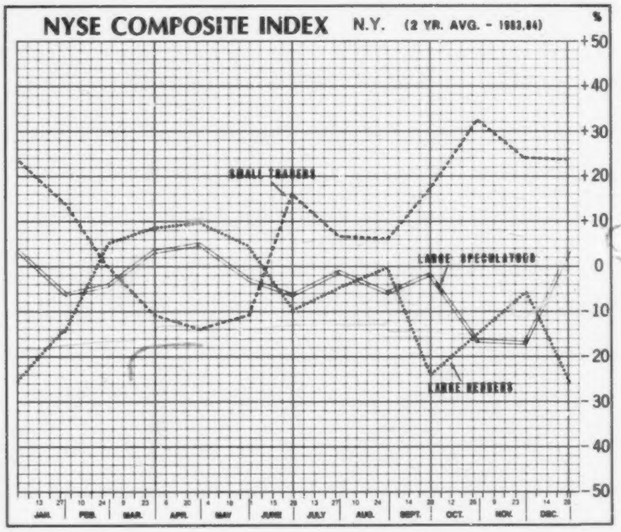

SUGAR "11" NEW YORK (5 YR. AVG. - 1978,80,81,83,84)
%
+50
+40
+30
+20
+10
0
-10
-20
-30
-40
-50
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

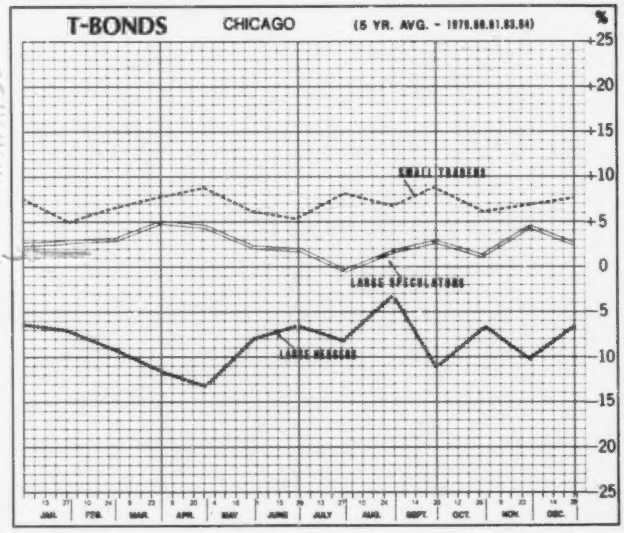

SOYBEAN MEAL CHICAGO (6 YR. AVG. - 1978,79,80,81,83,84)
%
+25
+20
+15
+10
+5
0
5
-10
15
20
25
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

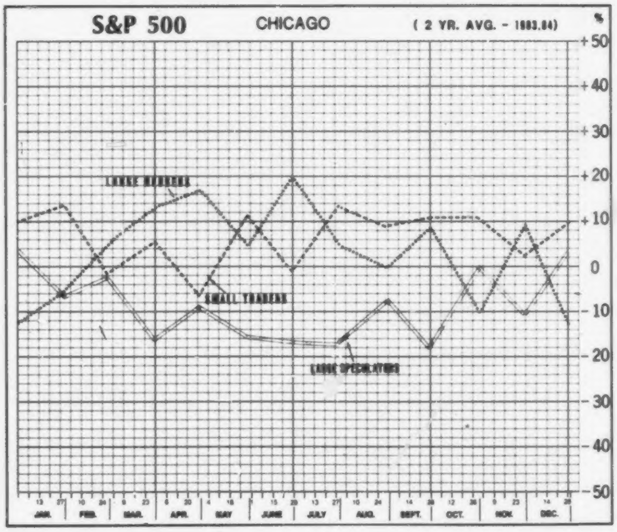

SWISS FRANC CHICAGO (2 YR. AVG. - 1983,84)
%
+40
+30
+20
+10
0
-10
-20
-30
-40
-50
-60
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
JAN.
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

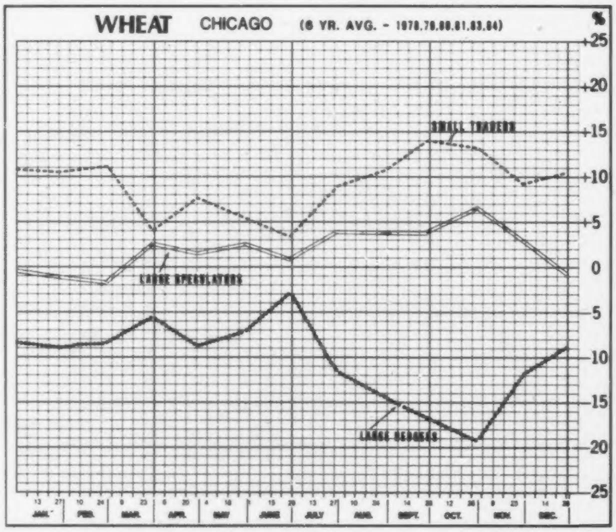

K.C. VALUE LINE
KANSAS CITY
(2 YR. AVG. - 1983.84)
%
+50
+40
+30
+20
+10
0
10
20
30
40
50
SMALL TRADERS
LARGE HEDGERS
LARGE SPECULATORS
13 27 10 24 9 23 6 20 4 18 1 15 29 13 27 10 24 14 28 12 26 9 23 14 28
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.


T-BILLS
CHICAGO
(5 YR. AVG. - 1979.80.81.83.84)
%
+25
+20
+15
+10
+5
0
5
10
15
20
25
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
13 27 10 24 9 23 6 20 4 18 1 15 29 13 27 10 24 14 28 12 26 9 23 14 28
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.


NYSE COMPOSITE INDEX
N.Y.
(2 YR. AVG. - 1983.84)
%
+50
+40
+30
+20
+10
0
-10
-20
-30
-40
-50
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
13 27 10 24 9 23 6 20 4 18 1 15 29 13 27 10 24 14 28 12 26 9 23 14 28
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.


T-BONDS
CHICAGO
(5 YR. AVG. - 1979.80.81.83.84)
%
+25
+20
+15
+10
+5
0
-5
-10
-15
-20
-25
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
13 27 10 24 9 23 6 20 4 18 1 15 29 13 27 10 24 14 28 12 26 9 23 14 28
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.


S&P 500
CHICAGO
(2 YR. AVG. - 1983.84)
%
+50
+40
+30
+20
+10
0
-10
-20
-30
-40
-50
LARGE HEDGERS
SMALL TRADERS
LARGE SPECULATORS
13 27 10 24 9 23 6 20 4 18 1 15 29 13 27 10 24 14 28 12 26 9 23 14 28
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.


WHEAT
CHICAGO
(6 YR. AVG. - 1978.79.80.81.83.84)
%
+25
+20
+15
+10
+5
0
-5
-10
-15
-20
-25
SMALL TRADERS
LARGE SPECULATORS
LARGE HEDGERS
13 27 10 24 9 23 6 20 4 18 1 15 29 13 27 10 24 14 28 12 26 9 23 14 28
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

FUTURES VOLUME HIGHLIGHTS

1984 in Comparison with 1983

Rank	Contracts With Volume Over 100,000	1984 Contracts	%	1983 Contracts	%	Rank
1.	T-Bonds, CBT	29,963,280	20.06	19,550,535	13.97	(1)
2.	S&P 500 Index, CME	12,363,592	8.28	8,101,697	5.79	(5)
3.	Soybeans, CBT	11,362,691	7.61	13,680,324	9.78	(2)
4.	Gold (100 oz), COMEX	9,115,504	6.10	10,382,805	7.42	(4)
5.	Corn, CBT	9,108,526	6.10	11,924,576	8.52	(3)
6.	Silver (5,000 oz), COMEX	6,742,508	4.51	6,432,982	4.60	(6)
7.	Deutsche Mark, CME	5,508,308	3.69	2,423,508	1.73	(19)
8.	Eurodollar (3-month), CME	4,192,952	2.81	891,066	.64	(31)
9.	Swiss Franc, CME	4,129,881	2.76	3,766,130	2.69	(12)
10.	Soybean Oil, CBT	4,009,548	2.68	3,858,558	2.76	(10)
11.	Soybean Meal, CBT	3,822,179	2.56	3,872,453	2.77	(9)
12.	Live Cattle, CME	3,553,270	2.38	4,248,152	3.04	(7)
13.	NYSE Composite Index, NYFE	3,456,798	2.31	3,506,439	2.51	(13)
14.	T-Bills (90-day), CME	3,292,817	2.20	3,789,864	2.71	(11)
15.	Wheat, CBT	2,974,886	1.99	3,886,914	2.78	(8)
16.	Copper, COMEX	2,506,365	1.68	3,186,914	2.28	(16)
17.	Sugar #11, CSC	2,449,549	1.64	3,201,968	2.29	(15)
18.	Japanese Yen, CME	2,334,764	1.56	3,442,262	2.46	(14)
19.	Live Hogs, CME	2,169,030	1.45	2,790,746	1.99	(17)
20.	No. 2 Heating Oil, NY, NYMEX	2,091,546	1.40	1,868,322	1.34	(21)
21.	Pork Bellies, CME	1,908,045	1.28	2,403,277	1.72	(20)
22.	Silver (1,000 oz), CBT	1,887,257	1.26	2,643,166	1.89	(18)
23.	Crude Oil, NYMEX	1,840,342	1.23	323,153	.23	(45)
24.	T-Notes (6 1/2-10 year), CBT	1,661,862	1.11	814,505	.58	(32)
25.	Major Market Index, CBT	1,514,737	1.01	-	-	-
26.	British Pound, CME	1,444,492	.97	1,614,993	1.15	(23)
27.	Soybeans, MIDAM	1,301,916	.87	1,171,294	.84	(25)
28.	Cotton #2, NYCE	1,137,141	.76	1,550,117	1.11	(24)
29.	Cocoa (10 M tons), CSC	1,127,752	.75	1,162,540	.83	(26)
30.	Wheat, KCBOT	956,668	.64	942,971	.67	(30)
31.	Domestic CD (90-day), CME	928,662	.62	1,079,580	.77	(27)
32.	Value Line Index, KCBOT	910,956	.61	724,979	.52	(34)
33.	GNMA Mrtges, CDR, CBT	862,450	.58	1,692,017	1.21	(22)
34.	Lumber, CME	753,568	.50	731,003	.52	(33)
35.	Leaded Reg. Gasoline, NY, NYMEX	653,630	.44	406,843	.29	(39)
36.	Corn, MIDAM	604,992	.41	629,678	.45	(35)
37.	Platinum, NYMEX	571,127	.38	1,053,282	.75	(28)
38.	Coffee "C", CSC	499,133	.33	427,441	.31	(38)
39.	Wheat, MIDAM	404,508	.27	334,413	.24	(44)
40.	Canadian Dollar, CME	345,875	.23	558,741	.40	(36)
41.	Wheat, MGE	338,487	.23	379,603	.27	(41)
42.	Orange Jce, Fzn. Conc., NYCE	317,364	.21	124,267	.09	(49)
43.	Feeder Cattle, CME	316,985	.21	537,173	.38	(37)
44.	Gold (Kilo), CBT	302,717	.20	302,745	.22	(46)
45.	T-Bonds, MIDAM	251,300	.17	267,259	.19	(47)
46.	S&P 100 Index, CME	166,202	.11	390,902	.28	(40)
47.	Palladium, NYMEX	159,019	.11	241,224	.17	(48)
48.	Oats, CBT	155,110	.10	359,825	.26	(42)
49.	Live Hogs, MIDAM	112,877	.08	108,069	.08	(50)
50.	Sugar #12, CSC	109,448	.07	84,120	.05	-
	Contracts with Volume Over 100,000 Contracts 1/			1,343,176	.96	
	Contracts with Volume Under 100,000 Contracts	679,609	.45	716,369	.50	
TOTAL		149,372,225	100.00	139,924,940	100.00	

1/ Contracts over 100,000 traded in 1983 but not over 100,000 in 1984

COMMODITY FUTURES CONTRACTS TRADED 1980 - 1984

	CONTRACT UNIT	1984	1983	1982	1981	1980
Wheat	5,000 bu	2,974,886	3,886,914	4,031,584	4,511,934	5,428,160
Corn	5,000 bu	9,108,526	11,924,576	7,948,257	10,674,986	11,946,975
Oats	5,000 bu	155,110	359,825	424,595	370,103	320,934
Soybeans	5,000 bu	11,362,691	13,680,324	9,165,520	10,489,932	11,768,197
Soybean Oil	60,000 lb	4,009,548	3,858,558	3,049,313	3,047,490	3,167,895
Soybean Meal	100 tons	3,822,179	3,872,453	2,784,423	3,039,633	3,218,690
Iced Broilers	30,000 lb	-	-	-	-	4,079
Silver	5,000 oz	-	21,470	77,682	214,236	341,033
Silver	1,000 oz	1,887,257	2,643,166	775,136	184,776	-
Gold	3 Kg	-	-	-	-	78
Gold	100 oz	-	4,133	19,515	14,749	71,401
Gold	Kilo	302,717	302,745	-	-	-
Plywood	76,032 sq.ft.	4,466	50,424	100,001	175,189	169,550
GNMA Mrtges, CD	$100,000	-	-	-	175	12,619
GNMA Mrtges, CDR	$100,000	862,450	1,692,017	2,055,648	2,292,882	2,325,892
GNMA II	$100,000	37,615	-	-	-	-
Com. Paper (90-day)	$1,000,000	-	-	-	49	15,996
Com. Paper (30-day)	$3,000,000	-	-	-	-	67
T-Notes (4-6 year)	$100,000	-	-	-	2,721	450
T-Notes (6 1/2-10 year)	$100,000	1,661,862	814,505	881,325	-	-
T-Bonds	$100,000	29,963,280	19,550,535	16,739,695	13,907,988	6,489,555
Domestic CD (90-day)	$1,000,000	-	-	145,360	158,920	-
T-Notes (2 year)	$100,000	-	562	-	-	-
Unleaded Reg. Gasoline	1,000 bbl	-	51,573	8,736	-	-
Crude Oil	1,000 bbl	628	94,591	-	-	-
Heating Oil	1,000 bbl	-	3,152	-	-	-
Major Market Index	$100 x Index	1,514,737	-	-	-	-
CHICAGO BOARD OF TRADE		67,667,952	62,811,523	48,206,790	49,085,763	45,281,571
Fresh Eggs	22,500 dz	-	-	18	13	2,798
Potatoes	80,000 lb	-	-	9	973	2,481
Live Hogs	30,000 lb	2,169,030	2,790,746	3,560,974	2,258,083	2,153,767
Pork Bellies, Fzn.	38,000 lb	1,908,045	2,403,277	2,811,674	1,997,697	2,250,945
Live Cattle	40,000 lb	3,553,270	4,248,152	4,440,992	4,282,293	5,997,047
Feeder Cattle	42,000 lb	316,985	537,173	603,769	620,885	874,313
Broilers	30,000 lb	-	-	2,118	20,048	45,237
Lumber	130,000 bd.ft.	753,568	731,003	516,619	635,934	838,676
Stud Lumber	100,000 bd.ft.	-	-	-	156	2,198
Plywood	152,064 sq.ft.	-	-	35	386	-
British Pound	25,000	1,444,492	1,614,993	1,321,701	1,491,102	1,263,750
Canadian Dollar	100,000	345,875	558,741	1,078,467	475,585	601,925
Deutsche Mark	125,000	5,508,308	2,423,508	1,792,901	1,654,891	922,608
Japanese Yen	12,500,000	2,334,764	3,442,262	1,762,246	960,598	575,073
Mexican Peso	1,000,000	15,364	40,308	65,036	18,905	19,301
Swiss Franc	125,000	4,129,881	3,766,130	2,653,332	1,518,767	827,884
Dutch Guilder	125,000	-	162	128	4	4
U.S. Silver Coins	$5,000	-	-	1	6	10
French Franc	250,000	8,388	26,348	16,474	2,080	144
Gold	100 oz	8,841	994,132	1,533,466	2,518,435	2,543,419
Leaded Regular Gas	1000 barrels	4,045	-	-	-	-
No. 2 Fuel Oil	1000 barrels	4,601	-	-	-	-
T-Bills (90-day)	$1,000,000	3,292,817	3,789,864	6,598,848	5,631,290	3,338,773
T-Bills (1-year)	$250,000	-	-	-	-	604
T-Notes (4-6 year)	$250,000	-	-	-	-	338
Domestic CD (90-day)	$1,000,000	928,662	1,079,580	1,556,327	423,718	-
Eurodollar	$1,000,000	4,192,952	891,066	323,619	15,171	-
S&P 500 Index	$500 x Index	12,363,592	8,101,697	2,935,532	-	-
S&P 100 Index	$200 x Index	166,202	390,902	-	-	-
CHICAGO MERC. EX.		43,449,682	37,830,044	33,574,286	24,527,020	22,261,295

	CONTRACT UNIT	1984	1983	1982	1981	1980
Wheat	5,000 bu	956,668	942,971	964,815	1,181,884	1,297,757
Grain Sorghum	5,000 bu	-	-	-	-	290
Value Line Index	$500 x Index	910,956	724,979	528,743	-	-
Mini Value Line	$100 x Index	30,179	25,092	-	-	-
KANSAS CITY BD. OF TR.		1,897,803	1,693,042	1,493,558	1,181,884	1,298,047
Wheat	5,000 bu	338,487	379,603	346,226	357,779	333,610
Sunflower Seeds	100,000 lb	-	4	38	14,845	27,368
White Wheat	5,000 bu	2,245	-	-	-	-
MINNEAPOLIS GRAIN EX.		340,732	379,607	346,264	372,624	360,978
Wheat	1,000 bu	404,508	334,413	243,640	279,082	550,950
Corn	1,000 bu	604,992	629,678	274,324	513,953	440,615
Oats	5,000 bu	7,067	11,797	12,981	4,176	2,364
Soybeans	1,000 bu	1,301,916	1,171,294	527,411	849,169	1,052,707
Silver	1,000 oz	19,497	96,611	125,409	143,051	209,494
New York Silver	1,000 oz	12,611	30,833	3,810	-	-
Gold	33.2 oz	41,690	349,044	383,499	469,460	447,494
New York Gold	33.2 oz	19,285	-	-	-	-
Platinum	25 oz	213	-	-	-	-
Copper	12,500 lbs	492	-	-	-	-
Live Cattle	20,000 lb	81,112	88,349	107,329	119,566	186,831
Live Hogs	15,000 lb	112,877	108,069	175,624	100,139	103,181
T-Bonds	$50,000	251,300	267,259	419,277	109,944	-
T-Bills	$500,000	30,486	37,755	100,417	-	-
Refined Sugar	40,000 lb	24	3,306	24,000	-	-
British Pound	12,500	8,901	884	-	-	-
Swiss Franc	62,500	99,385	19,632	-	-	-
Deutschemark	62,500	67,507	6,607	-	-	-
Japanese Yen	6,250,000	34,677	10,835	-	-	-
Canadian Dollar	$50,000	3,315	171	-	-	-
MIDAMERICA COM. EX.		3,101,855	3,166,537	2,397,721	2,588,540	2,993,636
Coffee "C"	37,500 lb	499,133	427,441	556,435	515,302	906,944
Sugar #11	112,000 lb	2,449,549	3,201,968	2,037,020	2,470,327	3,576,662
Sugar #12	112,000 lb	109,448	84,120	51,093	14,333	13,839
Cocoa	30,000 lb	-	-	-	-	187,309
Cocoa	10 M tons	1,127,752	1,162,540	607,964	562,651	201,662
COFFEE SUGAR & COCOA		4,185,882	4,876,069	3,252,512	3,562,613	4,886,416
Copper	25,000 lb	2,506,365	3,186,914	2,362,625	1,647,380	1,848,080
Zinc	60,000 lb	-	-	-	3	28
Silver	5,000 oz	6,742,508	6,432,982	2,868,639	1,240,720	1,058,734
Gold	100 oz	9,115,504	10,382,805	12,289,448	10,373,706	8,001,410
Aluminum	40,000 lb	82,661	11,896	-	-	-
T-Bills (90-day)	$1,000,000	-	-	-	1,052	76,081
T-Notes (2-year)	$100,000	-	-	-	30,188	17,653
GNMA Mrtges, CD	$100,000	-	-	-	-	7,403
COMMODITY EXCHANGE		18,447,038	20,014,597	17,520,712	13,293,049	11,009,389
Cotton #2	50,000 lb	1,137,141	1,550,117	1,255,792	1,415,213	2,490,405
Orange Jce,Fzn Con	15,000 lb	317,364	124,267	207,070	387,182	162,864
Propane	100,000 gal	22,005	28,721	16,919	496	25
NY COTTON, CIT. & PET.		1,476,510	1,703,105	1,479,781	1,802,891	2,653,294

	CONTRACT UNIT	1984	1983	1982	1981	1980
T-Bills (90-day)	$1,000,000	-	-	-	9,766	32,452
T-Bonds	$100,000	-	18	4,464	162,942	139,410
Domestic CD (90-day)	$1,000,000	-	-	132	117,807	-
British Pound	25,000	-	-	-	37	7,352
Canadian Dollar	100,000	-	-	-	4	692
Deutsche Mark	125,000	-	-	-	3	258
Japanese Yen	12,500,000	-	-	-	13	199
Swiss Franc	125,000	-	-	-	13	3,630
NYSE Composite Index	$500 x Index	3,456,798	3,506,439	1,432,913	-	-
NYSE Financial Index	$1,000 x Index	-	3,828	13,933	-	-
NY FUTURES EXCHANGE		3,456,798	3,510,285	1,451,442	290,585	183,993
Palladium	100 oz	159,019	241,224	63,829	40,822	62,217
Platinum	50 oz	571,127	1,053,282	669,024	490,493	429,708
U. S. Silver Coins	$10,000	-	-	-	41	6,808
Gold	1 Kg	-	-	-	-	10
Imported Lean Beef	36,000 lb	-	-	7	7,976	24,119
Potatoes	50,000 lb	-	17,115	67,322	237,411	393,759
Potatoes*	100,000 lb	26,595	16,650	-	-	-
No.2 Heating Oil,NY	1,000 bbl	2,091,546	1,868,322	1,745,526	995,506	238,284
No.2 Heating Oil,Gulf	1,000 bbl	-	-	74	1,856	-
Leaded Reg. Gasoline,NY	1,000 bbl	653,630	406,843	104,082	7,300	-
Leaded Reg.Gasoline,Gulf	1,000 bbl	-	-	77	2	-
Unleaded Gasoline, NY		2,736	-	-	-	-
Crude Oil	1,000 bbl	1,840,342	323,153	-	-	-
NY MERCANTILE EXCHANGE		5,344,995	3,926,589	2,649,941	1,781,407	1,154,905
Rice, Milled	120,000 lb	-	275	5,262	10,249	-
Rice, Rough	200,000 lb	2,978	11,964	11,253	11,478	-
Cotton	50,000 lb	-	1,004	8,388	9,271	-
Soybeans	5,000 bu	-	197	1,998	4,997	-
Corn	5,000 bu	-	102	971	-	-
CHICAGO RICE & COTTON EX.**		2,978	13,542	27,872	35,995	-
GNMA Mrtges, CD	$100,000	-	-	-	-	4,530
T-Bills (90-day)	$1,000,000	-	-	-	-	5
T-Bonds	$100,000	-	-	-	-	8,050
AMEX COMMODITY EX.		-	-	-	-	12,585
TOTAL ALL CONTRACTS		149,372,225	139,924,940	112,400,879	98,522,371	92,096,109
CHANGE FROM PREVIOUS YEAR		+6.32%	+24.5%	+14%	+7%	+21.2%

*Cash Settlement

**Formerly New Orleans Com. Ex.

Source: Futures Industry Associates

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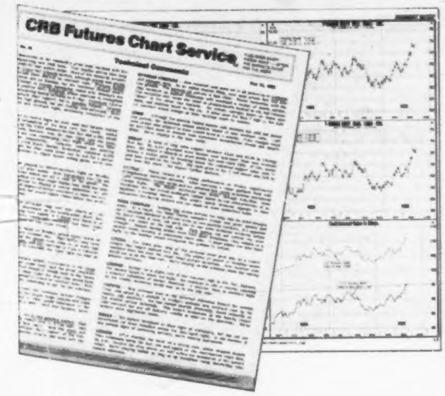

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Copper	N.Y., London
Corn	Chicago
Cotton	New York
Crude Oil	New York
Currencies	Chicago
Eurodollar	Chicago
Flaxseed	Winnipeg
Gasoil	London
Gasoline (Leaded)	New York
Gasoline (Unleaded)	New York
Ginnie Mae	Chicago
Gold	N.Y., London
Heating Oil #2	New York
Hogs (Live)	Chicago
Lead	London
Lumber	Chicago
Nickel	London
Oats	Chicago
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Palladium	New York
Platinum	New York
Pork Bellies	Chicago
Potatoes	New York
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Rapeseed	Winnipeg
Rubber	London
Rye	Winnipeg
Silver	N.Y., London
Soybeans	Chicago
Soybean Meal	Chicago
Soybean Oil	Chicago
Stock Index Futures	N.Y., Chic., K.C.
Sugar "11"	New York
Sugar	London
Tin	London
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Zinc	London

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Conversion Factors

The following equivalents are among those most commonly used in international agricultural trade:

METRIC EQUIVALENTS

1 hectare	(ha)	equals	2.471	acres
1 liter	(l)	equals	1.0567	liquid quarts
1 kilogram	(kg)	equals	2.204622	pounds
1 tonne	(1,000 kgs)	equals	2,204.622	pounds

1 metric ton equals:
- 2,204.622 lbs.
- 22.046 hundredweight
- 10 quintals

Bushel weights:
- Wheat & soybeans = 60 lbs.
- Corn, sorghum & rye = 56 lbs.
- Barley (grain) = 48 lbs.; Barley (malt) = 34 lbs.
- Oats = 32 lbs.; Rapeseed = 50 lbs.

Bushels to metric tons:
- Wheat & soybeans = bushels × .027216
- Barley = bushels × .021772
- Corn, sorghum, rye = bushels × .025400
- Oats = bushels × .014515

One metric ton (tonne) 1,000 kilograms =
- 36.7437 bushels wheat or soybeans
- 39.3679 bushels corn, sorghum, rye, flaxseed
- 45.9296 bushels barley
- 68.8944 bushels oats
- 44.092 rapeseed
- 22.046 cwt. rice

Area:
- 1 Acre = .404694 hectares
- 1 Hectare = 2.4710 acres

Yields:
- Wheat = bushels per acre × 0.6725 = quintals per hectare
- Rye, corn = bushels per acre × 0.6277 = quintals per hectare
- Barley = bushels per acre × 0.5380 = quintals per hectare
- Oats = bushels per acre × 0.3587 = quintals per hectare

Commodity	Unit	Approximate net Weight U.S.	Approximate net Weight Metric
		pounds	kilograms
Apples	Northwest box[1]	44	20
Barley	Bushel	48	21.8
Butter	Box	64	29
Castor Beans	Bushel	41	18.6
Castor Oil	Gallon	8[2]	3.6
Corn (shelled)	Bushel	56	25.4
Corn Oil	Gallon	7.7[2]	3.5
Cotton	Net Bale	480[3]	218
Cottonseed	Bushel	32[4]	14.5
Cottonseed Oil	Gallon	7.7[2]	3.5
Eggs (average size)	Case of 30 dozen	47	21.3
Flaxseed	Bushel	56	25.4
Flour (various)	Bag	100	45.4
Honey	Gallon	11.84	5.4
Linseed Oil	Gallon	7.7[2]	3.5
Milk	Gallon	8.6	3.9
Molasses (inedible)	Gallon	11.74	5.3
Oats	Bushel	32	14.5
Olives	Lug[5]	25–30	11.3–13.6
Olive Oil	Gallon	7.6[2]	3.5
Onions (dry)	Sack	50	22.7
Oranges (Fla. & Tex.)	Box[6]	90	40.8
Palm Oil	Gallon	7.7[2]	3.5
Peanuts (unshelled, Runners, Southeastern)	Bushel	21	9.5
Peanut Oil	Gallon	7.7[2]	3.5
Potatoes	Bag	50	22.7
Rapeseed	Bushel	50 and 60	22.7–27.2
Rice (rough)	Bushel	45	20.4
Rosin	Drum, net	520	236
Rye	Bushel	56	25.4
Sorghum Grain	Bushel	56	25.4
Soybeans	Bushel	60	27.2
Soybean Oil	Gallon	7.7[2]	3.5
Sugarcane: sirup	Gallon	11.45	5.2
Sunflower Seed	Bushel	24 and 32	10.9–14.5
Tobacco (flue-cured)	Hogshead	950	431

---

[1] Approximate inside dimensions 10½ × 11½ × 18″.
[2] Commonly used in trade. Actual weights vary according to temperature conditions.
[3] Estimated at 478 lbs. prior to 1946. Actual bale weights vary considerably.
[4] Average weight in most states.
[5] Approximate inside dimensions 5¾ × 13½ × 16⅛″.
[6] Approximate inside dimensions 12 × 12 × 24″.

CONVERSION FACTORS

Commodity	Unit	Approximate equivalent
Apples	1 pound dried	7 pounds fresh; beginning 1943, 8 pounds fresh
Do	1 pound chops	5 pounds fresh
Do	1 case canned [32]	1.4 bushels fresh
Applesauce	do [32]	1.2 bushels fresh
Apricots	1 pound dried	6 pounds fresh
Barley flour	100 pounds	4.59 bushels barley
Beans, lima	1 pound shelled	2 pounds unshelled
Beans, snap or wax	1 case canned [33]	0.008 ton fresh
Buckwheat flour	100 pounds	3.47 bushels buckwheat
Calves	1 pound live weight	0.557 pound dressed weight (1954–63 average)
Cattle	do	0.561 pound dressed weight (1954–63 average)
Cane sirup	1 gallon	5 pounds sugar
Cherries, tart	1 case canned [32]	0.023 ton fresh
Chickens	1 pound live weight	0.72 pound ready-to-cook weight
Corn, shelled	1 bushel (56 lbs.)	2 bushels (70 pounds) of husked ear corn
Corn, sweet	1 case canned [33]	0.030 ton fresh
Cornmeal:		
Degermed	100 pounds	3.16 bushels corn, beginning 1946
Nondegermed	do	2 bushels corn, beginning 1946
Cotton	1 pound ginned	3.26 pounds seed cotton, including trash [34]
Cottonseed meal	1 pound	2.10 pounds cottonseed
Cottonseed oil	do	5.88 pounds cottonseed
Dairy products:		
Butter	do	21.1 pounds milk
Cheese	do	10 pounds milk
Condensed milk, whole	do	2.3 pounds milk
Dry cream	do	19 pounds milk
Dry milk, whole	do	7.6 pounds milk
Evaporated milk, whole	do	2.14 pounds milk
Malted milk	do	2.6 pounds milk
Nonfat dry milk	do	11 pounds liquid skim milk
Ice cream [35]	1 gallon	15 pounds milk
Ice cream [35] (eliminating fat from butter and concentrated milk).	do	12 pounds milk
Eggs	1 case	47 pounds
Eggs, shell	do	39.5 pounds frozen or liquid whole eggs
Do	do	10.3 pounds dried whole eggs
Figs	1 pound dried	3 pounds fresh in California; 4 pounds fresh elsewhere
Flaxseed	1 bushel	About 2½ gallons oil
Grapefruit, Florida	1 case canned juice [33]	0.64 box fresh fruit
Hogs	1 pound live weight	0.579 pound dressed weight, excluding lard (1954–63 average)
Linseed meal	1 pound	1.51 pounds flaxseed
Linseed oil	do	2.77 pounds flaxseed
Malt	1 bushel (34 lbs.)	1 bushel barley (48 lbs.)
Maple sirup	1 gallon	8 pounds maple sugar
Nuts:		
Almonds, imported	1 pound shelled	3⅓ pounds unshelled
Almonds, California	do	2.22 pounds unshelled through 1949; 2 pounds thereafter
Brazil	do	2 pounds unshelled
Cashews	do	4.55 pounds unshelled
Chestnuts	do	1.19 pounds unshelled
Filberts	do	2.22 pounds unshelled through 1949; 2.5 pounds thereafter
Pecans:		
Seedling	do	2.78 pounds unshelled
Improved	do	2.50 pounds unshelled
Pignolias	do	1.3 pounds unshelled
Pistachios	do	2 pounds unshelled
Walnuts:		
Black	do	5.88 pounds unshelled
Persian (English)	do	2.67 pounds unshelled
Oatmeal	100 pounds	7.6 bushels oats, beginning 1943
Oranges, Florida	1 case canned juice [32]	0.53 box fresh
Peaches, California, freestone	1 pound dried	5⅓ pounds fresh through 1918; 6 pounds fresh for 1919–28; and 6½ pounds fresh from 1929 to date
Peaches, California, clingstone	do	7½ pounds fresh
Peaches, clingstone	1 case canned [32]	1 bushel fresh
Do	do	0.0230 ton fresh
Peanuts	1 pound shelled	1½ pounds unshelled
Pears	1 pound dried	6½ pounds fresh
Pears, Bartlett	1 case canned [33]	1.1 bushels fresh
Do	do	0.026 ton fresh

CONVERSION FACTORS

Commodity	Unit	Approximate equivalent
Peas, green	1 pound shelled	2½ pounds unshelled
Do	1 case canned [33]	0.009 ton fresh (shelled)
Prunes	1 pound dried	2.7 pounds fresh in California; 3 to 4 pounds fresh elsewhere
Raisins	1 pound	4.3 pounds fresh grapes
Rice, milled (excluding brewers)	100 pounds	152 pounds rough or unhulled rice
Rye flour	do	2.23 bushels rye, beginning 1947
Sheep and lambs	1 pound live weight	0.482 pound dressed weight (1954-63 average)
Soybean meal	1 pound	1.27 pounds soybeans
Soybean oil	do	5.49 pounds soybeans
Sugar	1 ton raw	0.9346 ton refined
Tobacco	1 pound farm-sales weight	Various weights of stemmed and unstemmed, according to aging and the type of tobacco. (See circular 435, U.S. Dept. of Agr.)
Tomatoes	1 case canned [33]	0.018 ton fresh
Turkeys	1 pound live weight	0.80 pound ready-to-cook weight
Wheat flour	100 pounds	2.30 bushels wheat [36]
Wool, domestic apparel shorn	1 pound greasy	0.48 pounds scoured
Wool, domestic apparel pulled	do	0.73 pound scoured

[1] Standard bushel used in the United States contains 2,150.42 cubic inches; the gallon, 231 cubic inches; the cranberry barrel, 5,826 cubic inches; and the standard fruit and vegetable barrel, 7,056 cubic inches. Such large-sized products as apples and potatoes sometimes are sold on the basis of a heaped bushel, which would exceed somewhat the 2,150.42 cubic inches of a bushel basket level full. This also applies to such products as sweetpotatoes, peaches, green beans, grean peas, spinach, etc.

[2] Approximate inside dimensions, 10½ by 11½ by 18 inches.

[3] Approximate inside dimensions, 4⅝ by 12½ by 16⅛ inches.

[4] Approximate inside dimensions, 4½ by 16 by 16⅛ inches.

[5] Approximate dimension., 4½ by 13½ by 16⅛ inches.

[6] Approximate inside dimensions, 13 by 12 by 32 inches.

[7] Inside dimensions vary. Common sizes are 13 by 13 by 22⅛ inches, and 13 by 15⅛ by 23 inches.

[8] Approximate inside dimensions, 13 by 18 by 21⅝ inches.

[9] Approximate inside dimensions, 13 by 13 by 22⅛ inches.

[10] This is the weight commonly used in trade practices, the actual weight varying according to temperature conditions.

[11] Approximate inside dimensions, 9¾ by 16 by 20 inches.

[12] Approximate inside dimensions, 4⅛ by 11½ by 14 inches.

[13] The standard weight of 70 pounds is usually recognized as being about 2 measured bushels of corn, husked, on the ear, because it required 70 pounds to yield 1 bushel, or 56 pounds, of shelled corn.

[14] For statistical purposes the bale of cotton is 500 pounds or 480 pounds net weight. Prior to Aug. 1, 1946, the net weight was estimated at 478 pounds. Actual bale weights vary considerably. and the customary average weights of bales of foreign cotton differ from that of the American square bale.

[15] This is the average weight of cottonseed, although the legal weight in some States varies from this figure of 32 pounds.

[16] Approximate inside dimensions, 9¼ by 10½ by 15 inches.

[17] Approximate inside dimensions, 1¾ by 11 by 16⅛ inches.

[18] Approximate inside dimensions, 11½ by 11½ by 24 inches.

[19] In California and Arizona from 1942 through 1953, the net weights as used by this Department were 77 pounds for oranges, 79 pounds for lemons, and 65 pounds for Desert Valleys grapefruit. Grapefruit in California areas, other than the Desert Valleys, averaged 68 pounds. The new weights effective in 1954 reflect the shift from the "box" to the other ½-box carton as the container used.

[20] Approximate inside dimensions, 10¼ by 10¹¹⁄₁₆ by 16⅝ inches for oranges or lemons, and 9¾ by 10¹¹⁄₁₆ by 16⅝ inches for grapefruit.

[21] Approximate inside dimensions, 5¾ by 13½ by 16⅛ inches.

[22] Approximate inside dimensions, 4¾ by 16 by 16⅛ inches.

[23] Approximate inside dimensions, 7¾ by 16 by 21⅞ inches.

[24] Approximate inside dimensions, 9⅞ by 13 by 25 inches.

[25] Approximate inside dimensions, 12 by 12 by 24 inches.

[26] Approximate inside dimensions vary. Common size is 4½ by 11½ by 16⅛ inches.

[27] Approximate inside dimensions, 8½ by 11½ by 18 inches.

[28] Approximate inside dimensions, 12 by 10½ by 33 inches.

[29] Inside dimensions vary. Ranges from 4 by 16 by 16⅛ inches to 6 by 16 by 16⅛ inches.

[30] Includes both sorghum grain (kafir, milo, hegari, etc.) and sweet sorghum varieties.

[31] This average of 55 pounds indicates the usual weight of sweetpotatoes when harvested. Much weight is lost in curing or drying and the net weight when sold in terminal markets may be below 55 pounds.

[32] Case of 24 No. 2½ cans.

[33] Case of 24 No. 303 cans.

[34] Varies widely by method of harvesting.

[35] The milk equivalent of ice cream per gallon is 15 pounds. Reports from plants indicate about 81 percent of the butterfat in ice cream is from milk and cream, the remainder being from butter and concentrated milk. Thus the milk equivalent of the milk and cream in a gallon of ice cream is about 12 pounds.

[36] This is equivalent to 4.51 bushels of wheat per barrel (196 pounds) of flour and has been used in conversions, beginning July 1, 1957. Because of changes in milling processes, the following factors per barrel of flour have been used for earlier periods: 1790-1879, 5 bushel; 1880-1908, 4.75 bushels, 1909-17, 4.7 bushels; 1918 and 1919, 4.5 bushels; 1920, 4.6 bushels; 1921-44, 4.7 bushels; July 1944-Feb. 1946, 4.57 bushels; March 1946-Oct. 1946, average was about 4.31 bushels; and Nov. 1946-June 1957, 4.57 bushels.

Alcohol

Salient Statistics of Alcohol in the United States In Millions of Gallons[3]

	Ethyl Alcohol								Denatured Alcohol[2]				
		Withdrawals							Completely	Specially			
			Tax-Free										
Fiscal Year Ending Sept[6]	Production[5]	Tax-Paid[5] 190° & Over	For Denaturation	For Use of U.S.	Other[1]	Total	Total Withdrawn	Stocks at End of Fiscal Year	Production	Production	Withdrawals	Stocks Aug. 30[6]	Prod. of Refined Methanol[4] (Synthetic & Natural)
1972–3	679.7	67.8	460.9	.9	115.9	577.6	645.4	89.6	2.3	246.7	247.2	2.8	974.6
1973–4	647.4	72.4	469.7	.6	88.1	563.3	635.7	82.2	2.2	256.7	257.2	2.3	1,064
1974–5	581.0	72.7	403.3	.3	36.4	440.0	512.7	116.7	1.3	219.3	220.1	2.0	1,036
1975–6	503.4	78.5	419.3	.5	13.7	433.5	512.0	93.1	1.1	221.1	220.5	2.7	779.6
1976–7[6]	498.8[4]	78.7	416.2	.4	14.6	431.2	509.9	79.0	1.1	225.3[4]	225.6[4]	2.7	940.1
1977–8	498.3[4]	85.2	393.7	.4	15.1	409.2	494.4	76.2	1.1	223.8[4]	224.6[4]	2.6	971.8
1978–9	506.7[4]		455.7	.4	17.4	473.6		61.5	1.1	227.7[4]	228.8[4]	2.6	970.4
1979–0	570.3[4]							76.2	18.0	260.7[4]	260.9[4]	2.0	971.8
1980–1	643.2[4]							75.4		301.2[4]	281.5[4]	3.5	1,077
1981–2	571.2[4]							49.1		230.7[4]	227.1[4]	4.0	1,292
1982–3	601.1[4]							49.3		284.9[4]	277.9[4]	6.6[4]	1,138
1983–4	677.5[4]							74.2		353.3[4]	355.9[4]	6.5[4]	1,202
1984–5	610[4]									380[4]	375[4]		1,230

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[1] Represents withdrawals for hospital, scientific and educational use, for exports, etc. [2] At denaturing plants. [3] Ethyl alcohol in proof gallons; denatured alcohol in wine gallons. [4] On a CALENDAR YEAR basis. [5] Represents alcohol and spirits of 190° of proof and over. [6] THE FISCAL YEAR PRIOR TO 1976–7 was from JULY–JUNE. *Source: Alcohol and Tobacco Division*

T.1

U.S. Production of Ethyl Alcohol[1] & Spirits In Millions of Tax Gallons[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	38.0	43.8	46.1	43.7	52.4	56.7	64.7	57.7	64.0	59.3	51.5	53.4	621.3
1973	57.1	52.5	57.1	58.4	58.1	55.9	54.2	57.4	59.9	62.7	62.2	56.4	692.1
1974	49.9	49.9	45.3	55.5	52.8	40.8	45.3	52.4	59.5	61.0	48.6	54.8	618.2
1975	52.0	40.4	44.5	41.4	39.8	39.1	41.3	40.1	39.6	53.8	46.4	48.0	526.4
1976	41.6	36.2	44.0	39.3	36.0	37.0	45.5	46.0	43.3	39.3	42.8	47.7	498.8
1977	36.5	37.7	42.8	39.2	43.5	43.2	40.3	40.9	41.0	44.7	48.9	39.7	498.3
1978	35.8	41.1	50.4	42.2	31.3	48.7	42.5	45.4	50.5	40.3	38.0	40.7	506.9
1979	42.8	41.3	49.3	47.3	42.9	48.2	43.8	46.0	53.7	49.4	51.0	54.6	570.3
1980	57.4	52.7	55.3	55.2	54.2	45.7	52.8	46.4	57.3	64.6	47.9	53.7	643.2
1981	49.2	44.3	49.3	51.0	44.0	42.2	45.1	55.8	53.1	44.0	47.8	45.4	571.2
1982	42.9	39.8	48.2	37.6	41.9	52.6	51.9	44.3	53.3	61.9	61.6	65.0	601.1
1983[3]	60.8	58.6	59.4	46.0	56.5	60.2	63.8	56.9	59.2	54.9	53.1	48.0	677.5
1984[3]	49.3	45.9	54.1	58.2	50.9	49.7	48.4	48.3	51.8				
1985													

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[1] At industrial alcohol plants. [2] A "tax gallon" is the alcoholic equivalent of a U.S. gallon at 60 degrees Fahrenheit, containing 50% of ethyl alcohol by volume. [3] Preliminary. *Source: Internal Revenue Service*

T.3

Average Wholesale Price Index of Ethyl Alcohol, in N.Y. Dec. 1973 = 100[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
1973	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
1974[1]	113.1	115.4	123.6	129.9	133.0	148.9	152.5	154.2	167.5	180.9	189.4	193.9	150.2
1975	201.6	206.3	219.2	219.2	217.8	218.0	216.8	214.6	215.8	217.1	218.2	216.6	215.1
1976	217.2	230.2	233.0	233.6	233.0	233.0	233.0	232.5	233.0	233.0	232.3	233.0	231.4
1977	231.6	233.0	232.3	232.3	232.3	233.0	238.8	244.9	243.6	243.1	242.5	243.9	237.6
1978	243.9	231.0	230.3	226.4	226.4	225.8	226.4	226.6	226.4	218.8	226.4	226.5	227.9
1979	234.8	239.2	239.2	243.6	248.1	249.4	260.1	265.4	277.6	284.3	291.5	292.2	260.5
1980	311.7	319.6	325.0	338.4	361.4	369.4	370.3	369.2	369.2	369.3	369.2	369.2	353.9
1981	369.2	369.2	370.3	370.3	368.5	368.5	387.3	387.3	387.3	396.8	392.0	383.3	379.2
1982	382.2	353.5	349.6	346.4	N.A.	338.7	341.1	345.2	336.6	335.5	335.9	N.A.	346.5
1983	336.4	335.2	334.4	333.3	333.2	333.2	337.2	337.1	337.0	337.0	340.4	340.4	336.2
1984	341.1	340.5	340.5	339.7	339.9	340.0	346.9	344.0	341.7	341.0	342.4	342.4	341.7
1985	339.3	334.2											

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[1] Data prior to 1974 are for specially denatured No. 1, 190 proof, tank carlots, f.o.b. eastern works; freight prepared in CENTS PER GALLON. *Source: Bureau of Labor Statistics* (0614-0341.04)

T.2

Aluminum

World production of aluminum in 1984 was some 9 percent above that of 1983, according to a preliminary estimate of the U.S. Bureau of Mines. U.S. production of primary aluminum increased 22 percent in 1984, to 4.1 million tons. U.S. primary aluminum producers began 1984 at a 78 percent rate of capacity (estimated at 4.9 million tons) versus 58 percent a year earlier. By May the operating rate had increased to about 87 percent of capacity as producers started potlines to meet increased demand as the U.S. economy continued its recovery. However, as world inventories increased and prices weakened, U.S. producers began to shut down potlines at some smelters and by year end the operating rate was down to about 75 percent of capacity. The Bureau of Mines estimated 1985 U.S. production of primary aluminum at 3.6 million tons, 12 percent below 1984 output.

The U.S. remained a net importer of aluminum in 1984. Total imports of aluminum metal for consumption increased about 34 percent from the 1983 level, with the largest gains registered by plates, sheets, bars, etc. Canada accounted for 68 percent of metals, alloys and crude imports in 1984, and was also a major supplier of scrap imports.

U.S. exports of aluminum in 1984 were estimated to have increased marginally to about 780 thousand tons. Japan accounted for about 54 percent of reported exports of metals, alloys and crude, and also was the major destination for scrap exports.

Recovery from scrap generated from current operations (new scrap) accounted for an estimated 53 percent of total recovery from purchased scrap. Discarded aluminum products (old scrap) such as cans accounted for the remainder. Aluminum recovery from old scrap in 1984 was estimated to have represented about 16 percent of U.S. consumption.

U.S. consumption of aluminum in 1984 increased an estimated 6 percent as the demand for transportation, building, and consumer durables industries continued to improve. The U.S. Bureau of Mines estimates 1985 U.S. consumption of aluminum at about 5.2 million tons. From a 1981 base (which was a year of low apparent metal consumption) apparent demand for aluminum is expected to increase at an average annual rate of about 6.7 percent through 1990.

Total aluminum metal inventories at the end of 1984 were estimated by the Bureau of Mines to have increased by nearly 18 percent from the year-earlier level. As of November 30, 1984, the National Defense Stockpile contained only about 2,000 tons of aluminum versus a goal of 635,000 tons. In the event of an emergency, a large part of the domestic aluminum demand could be diverted from nonessential civilian uses to strategic uses.

Aluminum's power intensity makes energy costs a subject of continuing concern. According to the U.S. Industrial Outlook 1985, the focus remains on the Pacific Northwest, which is the service area of the Bonneville Power Administration (BPA), where about one-third of total U.S. primary aluminum production capacity is located. In May 1984 the BPA announced its intentions to change the "average system cost" methodology, the effect of which over a 2-year period would raise the floor price that determines the post-June 1985 power rate for the aluminum industry. In June, the U.S. Supreme Court upheld BPA's authority to provide "nonfirm" (interruptible) power to the aluminum industry and other direct-served customers before power can be made available to public utilities. Nonfirm power supplies about one-fourth of the aluminum industry's electricity requirements. If this ruling had gone against the industry it would have meant that during periods of power shortages, the industry would have had to purchase such energy requirements from other, more expensive, sources. To encourage production in the Pacific Northwest the BPA reduced the power rate from 27.7 mills to 22.7 mills per kilowatt hour beginning September 1, 1984 for a period of 6 months, provided the producers purchased a specific amount of energy on a take-or-pay basis.

A number of structural changes are taking place in aluminum which have significant implications for U.S. smelters producing primary metal in particular. Largely as a result of high U.S. energy costs, new primary aluminum smelters are being built outside the U.S. in such locations as Canada, Australia and Brazil. A growing percentage of the world's primary smelting capacity involves government ownership. In addition, primary metal is supplying less of total aluminum supply as secondary recovery has increased. This trend is expected to continue as more used beverage cans are recycled and as availability of aluminum from scrapped automobiles increases.

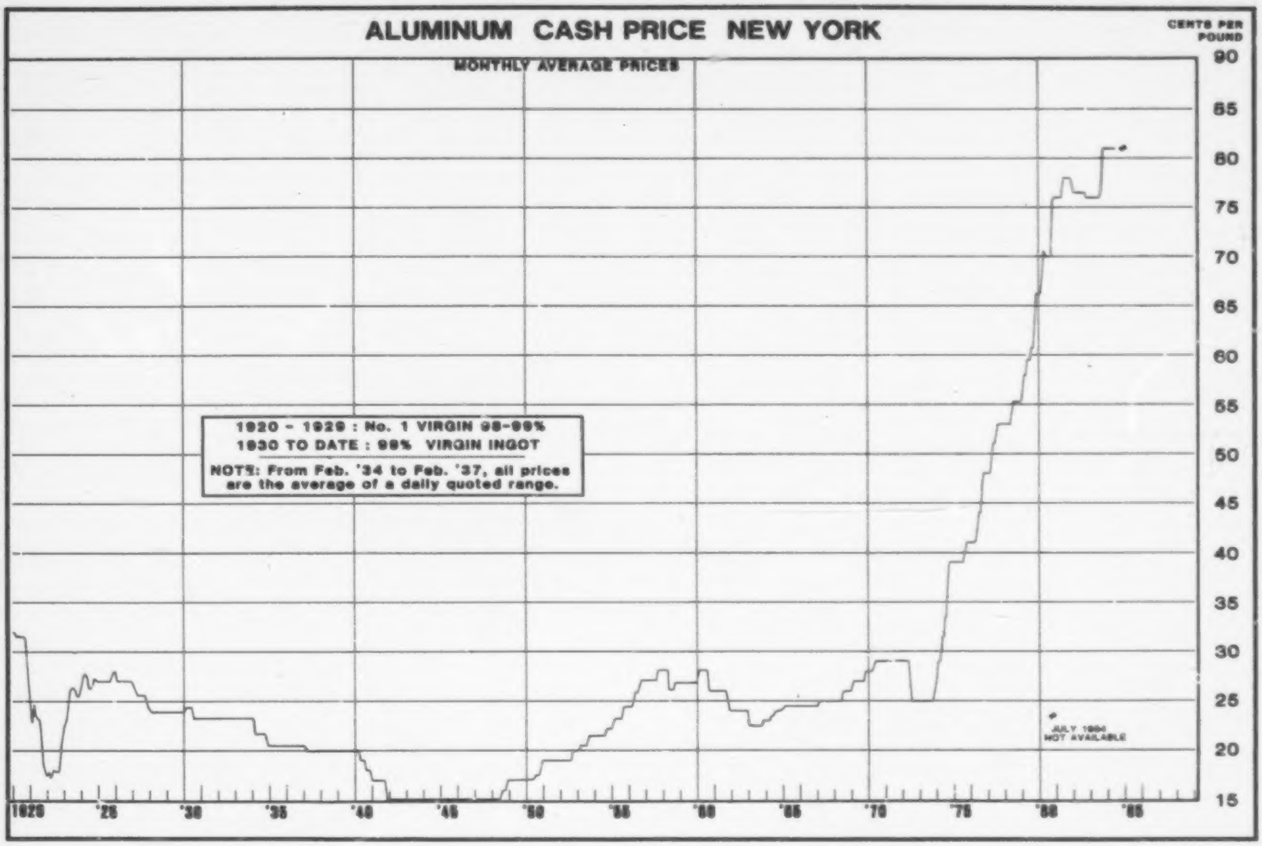
Futures Markets

Aluminum futures are traded on the London Metal Exchange (LME) and also on the Commodity Exchange, Inc in New York, where trading was initiated in early December 1983.

World Production of Aluminum In Thousands of Short Tons

Year	Australia	Austria	Canada	China	France	W. Germany	Hungary	Italy	Japan	Norway	Spain	Switzerland	Brazil	Un. Kingdom	United States	USSR	World Total
1977	273	101	1,073	385	440	818	79	287	1,310	686	233	88	184	386	4,539	1,810	15,189
1978	290	101	1,156	400	431	816	79	298	1,166	704	234	88	205	382	4,804	1,840	15,578
1979	297	102	904	400	436	817	79	297	1,114	732	286	91	263	396	5,023	1,930	16,044
1980	335	104	1,177	400	476	806	81	299	1,203	720	426	95	287	413	5,130	1,940	16,944
1981	418	104	1,230	400	480	804	82	298	849	698	437	91	283	374	4,948	1,980	16,596
1982[1]	420	104	1,174	410	430	797	82	298	387	702	404	83	330	265	3,609	2,070	14,802
1983[2]	475	104	1,091	381	398	730	82	216	282	716	394	84	442	275	3,353	1,996	13,865
1984[2]	710		1,230	380		750				780					4,099	2,100	15,170

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.4



Salient Statistics of Aluminum in the U.S. In Thousands of Short Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production: Primary	Production: Secondary	Primary Sold[1]	Recovery from Scrap: Old	Recovery from Scrap: New	Total Apparent Consumption	Net Shipments[5] by Producers — Wrought Products: Plate, Sheet, Foil	Rolled Structural Shapes[2]	Extruded Shapes[3]	All	Castings: Permanent Mold	Die	Sand	All	Total All Net Shipments
1976	9	4,251	1,155	6,145	409	1,062	5,083	3,178	493	1,071	4,858	189	605	110	923	5,780
1977	7	4,539	1,271	6,566	531	1,074	5,492	3,423	467	1,198	5,210	220	652	113	1,004	6,214
1978	11	4,804	1,323	7,143	575	1,098	6,045	3,643	583	1,311	5,673	229	666	126	1,044	6,717
1979	4	5,023	1,401	6,922	614	1,163	5,888	3,592	618	1,263	5,615	241	635	143	1,040	6,655
1980	[7]	5,130	1,389	6,003	680	1,058	5,065	3,346	606	1,165	5,242	193	443	121	769	6,011
1981	[7]	4,948	1,537	6,054	836	1,137	5,087	3,414	520	1,110	5,169	146	578	119	910	6,079
1982	7	3,609	1,616	5,610	862	974	4,818	3,030	431	1,005	4,558	120	529	89	803	5,361
1983[4]	17	3,696	1,773	6,654	904	1,050	5,543	3,579	475	1,149	5,301	140	481	112	750	6,051
1984[6]	9	4,518	1,668		915	1,054	5,875									

[1] To Domestic Industry. [2] Also rod, bar & wire. [3] Also rod, bar, tube, blooms & tubing. [4] Preliminary. [5] Consists of total shipments less shipments to other mills for further fabrication. [6] Estimate. [7] Net exports.

T.8

U.S. Supply and Distribution of Aluminum In Thousands of Short Tons

Year	Apparent Consumption	Production: Primary	Production: From Old Scrap	Imports	Exports	Inventories (Dec, 31): Private	Inventories (Dec, 31): Government	Year	Apparent Consumption	Production: Primary	Production: From Old Scrap	Imports	Exports	Inventories (Dec. 31): Private	Inventories (Dec. 31): Government
1979	5,888	5,023	614	840	773	2,563	2	1982	4,818	3,609	862	968	824	3,090	2
1980	5,065	5,130	680	713	1,483	2,538	2	1983[1]	5,543	3,696	904	1,203	855	2,497	2
1981	5,087	4,948	836	935	867	3,303	2	1984[2]	5,875	4,518	915	1,628	809	2,943	2

[1] Preliminary [2] Estimate *Source: U.S. Bureau of Mines*

T.8A

ALUMINUM

High, Low & Closing Prices of December Aluminum Futures in New York In Cents Per Pound

Year of Delivery	Yr. Prior to — Delivery — Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Life of Delivery Range
1984 High	—	86.15	81.75	79.10	76.85	71.95	67.35	65.90	59.65	55.50	48.90	53.45	55.30	51.40	86.40
Low	—	80.15	77.75	73.65	71.80	66.45	61.95	60.00	53.95	49.85	45.30	44.70	49.30	47.25	44.70
Close	—	81.45	78.85	73.95	72.60	66.55	65.00	60.55	54.10	49.95	47.10	50.90	49.30	47.25	—
1985 High	61.10	53.75	54.60	54.15											
Low	57.15	51.10	50.45	51.70											
Close	54.95	51.10	53.20	52.70											

Source: Commodity Exchange, Inc. (Comex)—N.Y. T.11A

Month End Open Interest of Aluminum Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	——— Futures Trading Began Dec. 8, 1983 ———											2,977
1984	3,304	3,006	3,262	2,278	2,678	1,868	3,141	3,017	2,974	4,058	5,269	4,220
1985	4,102	3,727										

Source: Commodity Exchange, Inc. (Comex)—N.Y. T.11B

Volume of Trading of Aluminum Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1983	——— Futures Trading Began Dec. 8, 1983 ———											11,896	11,896
1984	8,599	7,743	5,059	5,997	3,893	3,802	5,291	8,567	4,231	9,190	14,086	6,203	82,687
1985	10,768	9,222											

Source: Commodity Exchange, Inc. (Comex)—N.Y. T.11C

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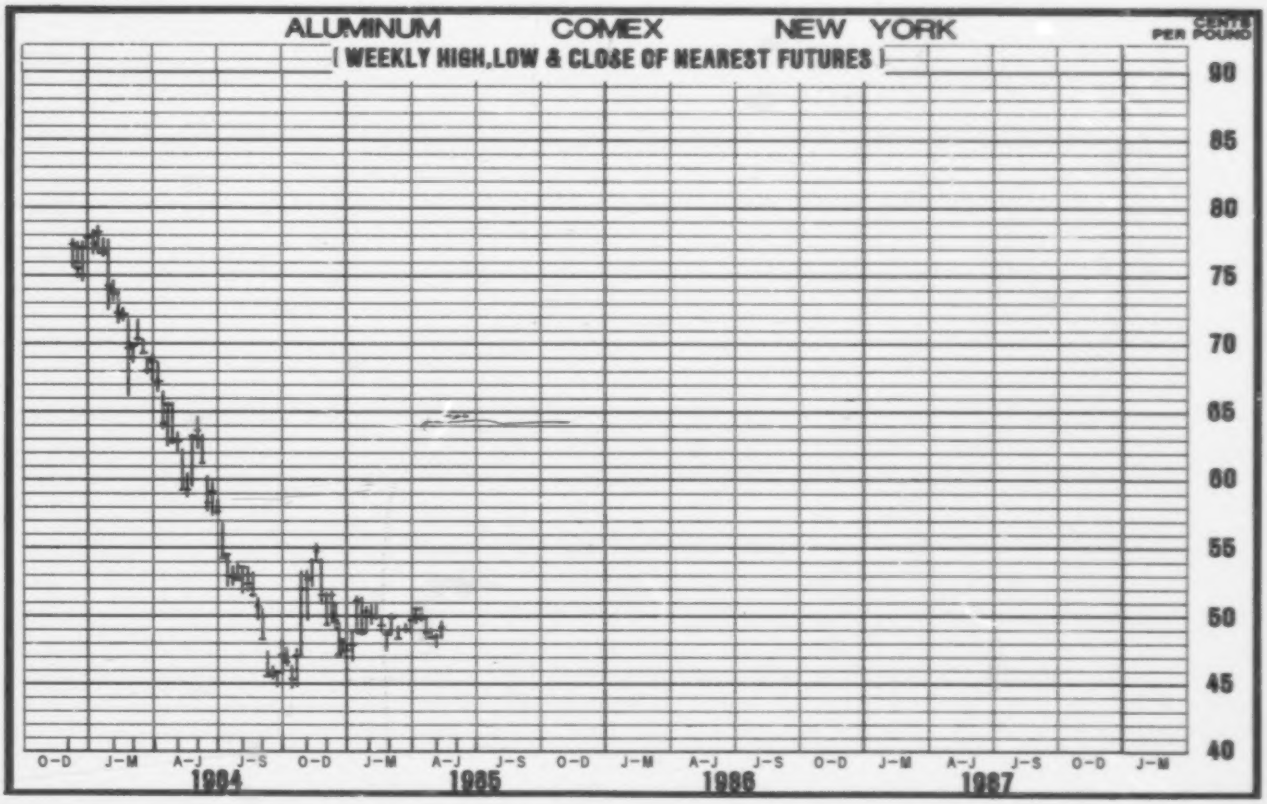


Average Price of Aluminum (Virgin 99.5% Unalloyed Ingot) at N.Y. In Cents per Pound, Carload Lots

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1982	76.50	76.50	76.50	76.50	76.50	76.50	76.50	76.50	76.50	76.00	76.00	76.00	76.38
1983	76.00	76.00	76.00	76.00	76.00	76.00	76.00	76.33	78.98	81.00	81.00	81.00	77.53
1984	81.00	81.00	81.00	81.00	81.00	81.00	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	81.00
1985	N.A.	N.A.											

Sources: American Metal Market

T.11

Average Price of Cast Aluminum Scrap (Crank Cases)[1] in New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1982	20.50	20.50	19.85	19.50	19.25	16.32	16.00	16.00	16.00	16.00	14.95	14.50	17.45
1983	15.12	17.50	19.50	19.50	23.50	25.50	27.65	31.80	33.50	33.50	33.50	33.50	26.17
1984	34.83	35.50	36.59	37.50	35.64	32.98	30.50	29.11	25.55	23.07	22.50	23.67	30.62
1985	25.50	25.50											

[1] Dealers' buying prices. *Source: American Metal Market*

T.12

U.S. Production of Primary Aluminum (Domestic & Foreign Ores) In Thousands of Metric Tons[3]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1981	445	404	448	431	441	420	426	416	393	396	364	364	4,948
1982[2]	351	311	336	319	321	300	297	287	271	275	266	275	3,609
1983[3]	253	223	248	245	265	261	284	297	299	320	318	340	3,353
1984[2]	342	324	350	347	365	351	349	344	329	338			

[1] Final annual totals. [2] Preliminary. [3] Data prior to 1983 are in thousands of short tons. *Source: Bureau of Mines*

T.9

Aluminum Products (Ingot & Mill Products) Shipments[1] in the U.S. In Million Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1981	1,104	1,073	1,290	1,207	1,196	1,260	1,044	1,133	1,083	1,059	860	928	13,237
1982[2]	849	934	1,095	1,995	971	1,113	879	1,100	1,014	1,059	943	1,108	12,039
1983[2]	908	928	1,201	1,084	1,235	1,193	1,100	1,285	1,256	1,196	1,204	1,318	14,103
1984[2]	1,186	1,366	1,509	1,199	1,366	1,343	1,144	1,241	1,150				

[1] Mill products & pig & ingot (net shipments). [4] Preliminary. *Source: Bureau of the Census*

T.10

U.S. Aluminum Inventories, Total (Ingot, Mill Prod. & Scrap) In Million Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1980	5,125	5,071	5,021	4,950	4,912	4,955	5,032	5,084	5,037	4,966	4,966	5,082
1981	5,076	5,221	5,323	5,408	5,495	5,600	5,632	5,964	6,086	6,187	6,276	6,524
1982[1]	6,607	6,670	6,742	6,658	6,683	6,684	6,577	6,626	6,508	6,434	6,431	6,391
1983[1]	6,200	6,158	6,093	5,892	5,744	5,579	5,439	5,472	5,353	5,236	5,273	5,191
1984[1]	4,994	5,176	5,229	5,306	5,435	5,579	5,618	5,775	5,794	5,919		

[1] Preliminary. *Source: Bureau of Mines*

T.5

Aluminum Exports (Metal & Alloys, Crude) from the U.S. In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1980	39.6	37.7	52.8	52.3	52.3	61.3	51.3	97.6	98.9	70.1	55.0	46.1	714.9
1981	59.4	23.2	32.9	48.6	29.3	23.5	29.3	16.8	9.2	24.1	23.1	24.6	344.2
1982	22.1	18.8	46.0	26.6	19.9	48.5	24.2	42.6	23.6	59.5	42.1	27.3	401.2
1983	56.1	13.4	15.4	51.2	9.0	16.4	40.9	36.6	45.8	30.2	56.0	26.6	397.6
1984	27.0	22.2	21.9	8.4	25.8	26.5	24.4	41.3	26.3	19.7	36.3		

Source: Bureau of the Census

T.7

Aluminum General Imports (Metal & Alloys, Crude) into the U.S. In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1980	61.8	45.3	47.8	45.4	42.1	51.7	40.3	40.7	43.0	41.4	29.9	78.3	580.8
1981	55.8	55.7	75.6	50.2	67.8	55.9	63.9	67.0	60.5	55.2	41.5	49.3	710.7
1982	38.5	65.9	61.7	61.0	51.0	66.5	42.2	78.2	52.8	52.7	60.1	47.8	679.4
1983	53.1	47.0	36.6	73.7	93.3	91.4	79.5	72.4	62.4	64.1	70.1	44.4	1,238.7
1984	78.2	104.6	126.0	75.8	119.9	81.5	73.6	75.0	99.1	102.5	75.6		

Source: Bureau of the Census

T.6

Antimony

World mine production of antimony in 1984 was marginally above that of 1983, according to a preliminary estimate of the U.S. Bureau of Mines. The major producers were the centrally planned economies which accounted for 40 percent of the estimated total and Bolivia, which accounted for 20 percent. Bolivian production dropped 5 percent in 1984 and production in the Republic of South Africa increased by 15 percent. U.S. mine production is insignificant.

The U.S. continued to rely rather heavily on imports in 1984, with total imports about 80 percent higher than in 1983. Imports of ore and concentrate rose 55 percent; metal—304 percent; and oxide—68 percent. Total imports from China and the Republic of South Africa increased sharply. Over the 1980–83 period major sources of metal imports were: Bolivia—52 percent; and China—29 percent. Bolivia accounted for 49 percent of ore and concentrate imports, Mexico—20 percent; and Canada—10 percent.

U.S. consumption of primary antimony increased 2 percent in 1984. The decline in the use of antimony for batteries is expected to be offset by increased consumption of antimony oxide as a flame retardant, which has become the dominant market for primary antimony.

U.S. industry stocks of primary antimony at the end of 1984 totaled 7,247 tons, up 84 percent from the year-earlier figure. Most of the gain was in oxides, which accounted for 73 percent of total stocks.

The National Defense Stockpile held 38,840 tons on November 30, 1984, versus the 36,000 ton goal. The Defense Authorization Act for fiscal 1985 authorized the sale of 32,000 tons of antimony metal from the stockpile. The GSA intended to limit fiscal 1985 sales to 1,000 tons. The New York dealer price for antimony metal began 1984 at $1.25 to $1.35 per pound, rose to $1.65–$1.75 in the fourth quarter and ended the year at $1.35 to $1.40 per pound.

World Mine Production of Antimony (Content of Ore) In Short Tons

Year	Australia	Bolivia	Canada[2]	China[1]	Czechoslovakia	Italy	Morocco	Mexico[2]	Peru[5]	Turkey	South Africa	United States	USSR	Yugoslavia[4]	World Total[1]
1982[3]	1,326	15,408	—	11,000	551	374	998	1,725	814	1,189	10,070	503	9,900	1,543	59,277
1983[1]	1,300	11,600	—	11,000	550	400	1,100	1,700	770		6,947	838	10,000	1,500	53,301
1984[1]		11,000						1,700			8,000			1,500	53,500

[1] Estimate. [2] Includes antimony content of miscellaneous smelter products. [3] Preliminary. [4] Metal. [5] Recoverable. *Source: Bureau of Mines*

T.13

Salient Statistics of Antimony in the United States In Short Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production				Imports[5]				Industry Stocks, Dec. 31[2]						Prod. of Antimonial Lead[2]
		(Gross Weight) Ores	Primary[2] Mine	Primary[2] Smelter	Secondary (Alloys)[2]	Ore Gross Weight	Ore Sb Content	Metal Gross Weight	Exports[3]	Ores & Concentrates	Metallic	Oxide	Sulfide	Residues & Slag	Total[6]	
1982	50		503	12,282	16,596	5,607	2,769	1,899	830	532	556	4,711	24	150	5,973	N.A.
1983[1]	54		838	15,017	14,204	6,305	2,770	1,282	304	446	805	2,614	19	51	3,935	N.A.
1984[4]				16,842			4,299	3,898	511	1,432	503	5,298	14		7,247	

[1] Preliminary [2] Antimony content. [3] Antimony ore, metal & compounds. [4] Estimate. [5] Imports for consumption. [6] Including primary antimony residues & slag. *Source: Bureau of Mines*

T.15

Industrial Consumption of Primary Antimony in the United States In Short Tons (Antimony Content)

Year	Ammunition	Metal Products							Non-Metal Products							Grand Total
											Non-Metal					
		Antimonial Lead	Sheet & Pipe	Bearing Metal & Bearings	Cable Covering	Solder	Type Metal	Total All Metal Products	Fireworks	Flame Retardant	Ceramics & Glass	Rubber Pdt's.	Pigments	Plastics	Total[3]	
1982	294	793	26	143	25	124	11	1,493	6	4,833	1,358	221	330	1,050	3,088	9,414
1983[1]	175	921	43	143	31	154	10	1,557	4	6,204	1,252	70	198	1,453	3,112	10,873
1984[2]		729		88		66		1,247		5,787	1,026		128	885	2,189	9,223

[1] Preliminary. [2] Estimate. [3] Excludes flame-retardant. *Source: Bureau of Mines*

T.16

Antimony Imported[3] into the U.S. and Price Ranges

Year	Imported for Consumption							¢[2] Lb.			
	Antimony Ore	Needle or Liquated Antimony		Antimony Metal		Antimony Oxide					
	Value Ths. $	Gross Weight Sh. Tons	Value $ Ths.	Short Tons	Value $Ths.	Short Tons	Value $ Ths.	Foreign Metal	Antim. Trioxide	Metal[4]	Domestic Refined
1982	4,289	88	188	1,900	3,893	10,433	18,045	93–124	120–180	107.2	200
1983[1]	2,335	47	58	1,282	1,987	10,604	13,318	78–135	100–120	91.3	200
1984[1]				3,898						151.2	200

[1] Preliminary. [2] Duty paid delivery, N.Y. [3] Imports for consumption. [4] N.Y. Dealer Price, 99.5% to 99.6%, C.I.F. U.S. ports. *Source: Bureau of Mines*

T.17

Apples

World Production of Apples (Dessert & Cooking) In Thousands of Metric Tons

Year	Mexico	Argentina	Australia	Spain	Belg-Lux.	Canada	France	West Germany	Italy	Japan	Netherlands	Turkey	United Kingdom	United States[2]	Yugoslavia	World Total
1972		233	456		265	393	1,719	1,239	1,873	959	400	850	350	2,668	309	13,849
1973		233	335	1,015	246	375	2,060	2,016	2,050	963	460	850	456	2,830	448	15,719
1974	213	786	368	1,038	209	406	1,610	1,281	1,886	850	385	950	340	2,964	370	14,895
1975	230	608	368	1,091	268	460	2,125	2,035	2,127	989	430	900	338	3,415	370	16,910
1976	329	576	275	1,008	241	409	1,598	1,487	2,143	879	380	1,000	388	2,936	483	15,501
1977	297	820	301	672	120	411	1,186	1,176	1,828	959	315	900	234	3,057	381	13,934
1978	313	810	258	1,015	273	452	1,768	1,783	1,874	844	510	1,000	342	3,446	381	16,589
1979	338	972	345	1,097	322	435	1,769	1,951	2,023	853	450	1,350	334	3,694	428	16,605
1980	282	908	345	859	330	553	1,802	1,880	1,966	960	450	1,100	321	4,005	483	17,179
1981	280	804	330	1,007	134	419	1,468	773	1,773	846	260		227	3,517	508	14,308
1982	394	817	301	891	270	478	1,978	2,637	2,642	924	440		340	3,684	746	18,418
1983[1]	302	934	281	1,047	203	485	1,573	1,313	2,056	1,048	364		293	3,798	557	16,212
1984[3]	380	950	320	1,049	230	455	1,930	1,799	2,075	986	380		312	3,729	607	17,354
1985																

[1] Preliminary. [2] Commercial crop. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.18

Salient Statistics of Apples[1] in the United States

Year	Production: Total	Production: Having Value	Western Avg. Auction Price N.Y. $ Per Box: Golden Delicious	Western Avg. Auction Price N.Y. $ Per Box: Red Rome	Utilization of Quantities Sold: Fresh	Processed[5]: Canned	Processed[5]: Dried	Processed[5]: Frozen	Processed[5]: Juice & Cider	Processed[5]: Other[3]	Avg. Farm Price ¢ Per Lb.	Farm Value Million $	Foreign Trade[4] Domestic Exports: Fresh	Foreign Trade[4] Domestic Exports: Dried[5]	Foreign Trade[4] Imports Fresh & Dried[5]	Fresh Per Capita Consumption Lbs.
	Millions of Pounds												Metric Tons[6]			
1972	5,879	5,868	6.36	5.04	3,342	977	149	235	1,029	136	6.43	377.5	3.1	.3	2.3	15.8
1973	6,265	6,252	7.76	5.00	3,539	1,255	248	259	822	128	8.80	549.0	3.7	.3	1.9	16.1
1974	6,580	6,530	8.81	7.04	3,691	1,226	197	182	1,031	204	8.40	551.6	4.9	.2	1.6	16.5
1975	7,530	7,103	8.22	5.16	4,357	1,027	230	207	1,192	91	6.50	460.9	4.7	.2	2.6	19.1
1976	6,472	6,467	7.57	3.67	3,916	920	229	220	1,109	73	9.10	586.5	123.7	4.6	55.7	17.1
1977	6,740	6,710	8.76	7.28	3,860	1,076	226	161	1,267	121	10.60	708.6	142.4	8.2	63.6	16.9
1978	7,597	7,544	9.77	6.00	4,210	1,224	221	207	1,495	186	10.40	781.4	154.8	7.3	78.5	17.5
1979	8,143	8,118			4,305	1,337	256	137	1,955	130	10.90	883.4	237.3	5.5	71.2	17.6
1980	8,828	8,810			4,942	1,202	195	168	2,139	165	8.70	762.5	311.3	7.6	85.6	19.1
1981	7,754	7,706			4,454	1,002	190	173	1,800	87	11.10	853.0	—273.7—		79.8	16.8
1982	8,116	8,122			4,527	1,249	210	191	1,809	116	10.00	812.2	—273.3—			17.9
1983[2]	8,314	8,373			4,611	1,210	258	170	1,951	93	10.50	879.2	—222.4—			18.5
1984[2]	8,334	8,222									11.70	962.0				
1985																

[1] Commercial crop. [2] Preliminary. [3] Mostly crushed for vinegar. [4] Year beginning Oct. [5] Fresh weight basis. [6] Prior to 1976 data is in millions of bushels. *Source: Statistical Reporting Service, U.S.D.A.* T.19

Wholesale Price of Apples (Delicious) in the United States In Dollars Per Box

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	6.045	6.393	5.956	6.164	5.903	5.748	N.A.	N.A.	N.A.	7.350	8.121	7.560	6.582
1973	7.300	6.490	7.773	8.687	8.333	10.387	N.A.	N.A.	N.A.	6.869	8.125	7.868	7.981
1974	7.110	7.370	6.066	6.650	8.500	N.A.	N.A.	N.A.	8.213	9.793	N.A.	8.320	7.753
1975	8.193	9.500	10.000	9.580	11.783	14.081	N.A.	N.A.	N.A.	7.261	7.272	7.440	9.457
1976	7.217	8.437	8.250	8.750	7.752	8.070	N.A.	N.A.	N.A.	9.610	9.008	9.785	8.542
1977	N.A.	10.900	10.030	9.794	9.725	9.935	N.A.	N.A.	N.A.	9.960	9.000	8.020	9.417
1978	11.183	11.280	11.305	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	21.612	14.000	13.876
1979	13.500	14.000	14.000	14.500	13.500	13.750	N.A.	N.A.	N.A.	12.750	14.500	15.250	13.972
1980	15.750	15.667	16.750	16.750	16.750	19.000	N.A.	N.A.	N.A.	12.500	12.000	12.000	15.240
1981	12.000	12.250	13.500	12.583	12.875	13.500	N.A.	N.A.	N.A.	16.000	15.125	15.500	13.704
1982	15.125	16.000	16.833	15.000	N.A.	N.A.	N.A.	N.A.	N.A.	13.500	13.000	14.000	14.780
1983	13.000	13.500	13.125	12.563	13.000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	14.500	13.281
1984	15.000	16.500	16.250	16.250	16.250	N.A.	N.A.	N.A.	N.A.	16.500	15.500	15.750	16.000
1985	14.750												

Source: Bureau of Labor Statistics (0111-0215.01) T.20

Arsenic

World plant production of arsenic trioxide in 1984 increased about 4 percent in 1984, according to the U.S. Bureau of Mines. A reduction in estimated Mexican output was offset by a corresponding increase in Peru's production. Output was increased in some other market economy countries. The Soviet Union remained the world's largest producer, accounting for about 38 percent of total output.

U.S. production of arsenic trioxide (recovered as a byproduct of the smelting of high-arsenic copper concentrates and arsenic-bearing residues) is small. Virtually all of domestic requirements are met by imports of arsenic trioxide. Major import sources in the 1980–1983 period were: Sweden—32 percent; Canada—22 percent; Mexico—22 percent; and France—11 percent. Imports of arsenic trioxide increased nearly 18 percent in 1984, while imports of arsenic compounds (gross weight) for consumption dropped 30 percent, according to an early Bureau of Mines estimate. Domestic demand, as reflected in imports, increased considerably above the low level of 1983, but was below the peak demand of 1981. The largest increase in demand came from agricultural usage. The major agricultural market for arsenical herbicides and desiccants, cotton growing, was adversely influenced during 1983 by the USDA's special program of payment-in-kind (PIK) for acreage diversion for 1983 crops. This program was not renewed in 1984.

Estimated U.S. end use distribution of arsenic in 1984 was as follows: industrial chemicals (wood preservatives)—55 percent; agricultural chemicals—35 percent, glass—5 percent; non-ferrous alloys—3 percent, other uses—2 percent.

In July 1984, the Environmental Protection Agency (EPA) issued its final position on the use of arsenical compounds, creosote and pentachlorophenol wood preservatives. EPA classified these three preservatives for restricted use only by certified applicants, and specified workplace regulations and consumer education requirements on the handling and disposal of treated wood. There are substitutes for arsenic in major end uses, although arsenic may be preferred because of lower cost and superior qualities.

World Production of White Arsenic (Arsenic Trioxide) In Metric[4] Tons

Year	Portugal	Spain	Brazil	Canada	France	W. Germany	USSR	Japan	Mexico	Peru	Rep. of Korea	Sweden	Namibia[3]	World Total
1973	399	—	76	—	9,000	520	7,990	322	5,606	1,528	10	16,755	8,981	51,187
1974	290	—	20	—	9,000	401	8,050	213	10,477	2,175	18	16,190	7,319	54,153
1975	282	—	14	—	7,300	350	8,100	66	6,747	1,461	110	12,884	7,345	44,659
1976	306		0		8,023	400	8,200	66	6,062	879	1,028	7,411	5,646	38,021
1977	245		—		6,661	400	8,300	131	6,332	1,507	713	6,613	2,882	33,784
1978	279				6,500	400	8,400	100	6,884	1,457	604	6,700	2,647	33,971
1979	345				5,550	—	7,700	182	6,537	1,415	590	5,080	2,221	29,620
1980	200				5,300	360	7,700	284	6,932	2,475	N.A.	4,080	1,288	28,619
1981	196	—	—	—	5,200	360	7,800	95	6,517	2,164	170	4,000	1,370	27,872
1982[1]	200	—	—	—	5,100	360	7,900	100	4,740	1,663	306	4,000	1,895	26,264
1983[2]	190				5,000	360	8,000	100	4,700	1,800	N.A.	4,000	1,126	25,276
1984[2]					5,000		8,000		4,500	2,000		4,000	1,200	26,000

[1] Preliminary. [2] Estimate. [3] Output of Tsumeb Corp. Ltd. only. [4] Data Prior to 1979 are in Short Tons. *Source: Bureau of Mines* T.21

Salient Statistics of White Arsenic in the U.S. In Metric[5] Tons

	Imports For Consumption									Imports of Arsenic Trioxide from						
Year	Tri-oxide (As_2O_3)	Metallic Arsenic	Arsenic Acid	Sulfide	Arsenic Compounds	Trioxide Mexican 99.13% As_2O_3 ¢ lb.[3]	Value of Imports Thous. $	Trioxide Domestic[4] 95% As_2O_3 — ¢ lb. 12/31 —	Metal Domestic 99% As — ¢ lb. 12/31 —	Peru	Canada	France	Mexico	South Africa	Sweden	Bel-Lux.
1973	13,496	643			—		2,045			25		1,281	5,605	409	6,144	
1974	13,742	707			43		2,449			24	—	480	6,185	145	6,889	
1975	12,013	483			77	16.5	4,426	13.1	160	66	—	595	3,174	970	7,172	
1976	4,262	288			355	17	1,528	13.1	175	—	—	462	3,793	—	3	
1977	5,981	357	382	—	1,109	18	1,962	13.1	190	—	22	1,352	3,089	—	1,323	
1978	10,306	369	565	—	473	27	5,918	23¼	190	—	136	5,077	2,603	—	2,281	189
1979	12,325	405	176	39	1	30	7,728	24¼	190	477	277	3,242	3,125	—	5,014	184
1980	12,528	266	271	11	1	46	9,190	31¾	300	—	486	2,780	3,720		4,770	388
1981[5]	17,199	294	1.511	—	4	78	17,742	40	275	50	5,581	749	3,566	17	4,902	1,251
1982	14,599	136	699	18	362	59	17,884	40	245	—	3,352	1,992	2,276	—	4,192	1,030
1983[2]	10,186	243	2,385	1,127	26	45	13,883	33	225	—	2,525	667	2,531	17	3,430	946
1984[1]	12,000	300				42		33	210						8	

[1] Estimate. [2] Preliminary. [3] F.O.B. Laredo, TX. [4] F.O.B. Tacoma, Wash. [5] Data Prior to 1981 are in Short Tons. *Source: Bureau of Mines* T.22

Barley

In February 1985, the USDA pegged world production of barley in the October/September 1984/85 crop year at 172.5 million tonnes, up from 169.8 million the previous year. Increased output from Australia, East Europe, the EC-10 countries and others more than offset the nearly 14 million tonne decline from 1983/84 levels in Soviet Union production.

Utilization in 1984/85 was estimated at 168.4 million tonnes, compared with 176.1 million in 1983/84. The decline in utilization was almost entirely caused by the projected 10.4 million tonne decline in Soviet use.

Total world exports in 1984/85 were expected at 18 million tonnes, up from 15.9 million in 1983/84, EC-10 exports were expected to increase to 6 million tonnes from 3.4 million the previous year. The USDA pegged U.S. exports at 2.2 million tonnes, about unchanged from a year earlier.

World stocks of barley at the end of the 1984/85 season were projected at 17.8 million tonnes, 22 percent higher than the 13.8 million recorded in 1983/84.

The USDA estimated beginning U.S. barley stocks for the 1984/85 season at 189 million bushels, down from year-earlier stocks of 217 million bushels. U.S. production was pegged at 597 million bushels versus 509 million in 1983/84. An increase in harvested acreage to 11.2 million from 9.7 million in 1983/84 and a 53.9 bushel per acre yield compared to 52.3 the preceding year boosted production. A slight decline in feed use was expected in 1984/85, while exports and the food, industrial and seed use category were expected to remain steady. Total domestic use in 1984/85 was projected to stay on a par with the previous season at 450 million bushels. Ending stocks for the 1984/85 crop year were projected by the USDA in March 1985 at 256 million bushels compared to 189 million in 1983/84.

On January 1, 1985, U.S. barley stocks in all positions totaled 437.8 million bushels, up 16 percent from stocks January 1, 1984. About 68 percent of those stocks were located on-farm. North Dakota, Minnesota, and Idaho accounted for nearly 57 percent of total stocks.

Prospective U.S. barley plantings for 1985 were put at 12.4 million acres by the USDA in February. This figure represents a 4 percent increase from acreage planted in 1984. Because barley grows well in cool, dry climates, acreage is concentrated in the Pacific Northwest and the Northern Plains. Acreage increases were expected in Minnesota, North Dakota, South Dakota, Washington, and Oregon. Acreage declines were indicated in California, Colorado, Idaho, and Utah.

The average farm price to U.S. producers in the 1984/85 crop year was estimated by the USDA in March in a range of $2.25 to $2.35 per bushel. The average farm price in 1983/84 was 2.50. Although barley as not included in the PIK program and production in 1983/84 was only about 1 percent lower than the previous year, barley prices were higher in 1983/84 in response to strong corn prices caused by the PIK program and drought in the Corn Belt.

U.S. Government Price Support

The barley loan rate and target price for the 1985 crop will remain the same as for 1984. The loan rate will be $2.08 per bushel, and the target stays at $2.60 per bushel.

Futures Market

Feed barley futures are traded on the Winnipeg Commodity Exchange.

World Barley Supply and Demand In Millions of Metric Tons

	Exports						Imports			Utilization				Stocks[2]		
Crop Year	Australia	Canada	EC-10	Total Non-U.S.	U.S.	Total Exports	U.S.S.R.	Total Imports	Production	West Europe	Non-U.S.	U.S.	Total Utilization	Non-U.S.	U.S.	Total Stocks
1979–80	2.9	3.0	3.2	10.0	1.2	11.3	2.3	11.3	160.2	51.4	157.6	8.2	165.8	13.8	4.2	18.0
1980–81	1.5	4.0	4.6	12.4	1.8	14.2	4.0	14.2	164.0	52.0	157.2	7.6	164.8	14.1	3.0	17.1
1981–82	1.7	5.5	3.5	12.8	2.0	14.8	3.6	14.8	157.0	48.3	149.1	8.1	157.2	13.7	3.2	16.9
1982–83	.6	6.1	3.9	12.5	1.0	13.5	2.2	13.5	164.5	49.5	152.6	8.9	161.6	15.1	4.7	19.8
1983–84	3.7	4.2	3.3	13.6	2.1	15.8	.5	15.8	169.0	49.0	165.0	9.8	174.8	9.8	4.1	13.9
1984–85[1]	4.1	3.0	6.0	16.2	2.2	18.4	3.4	18.4	172.7	50.2	157.0	9.8	166.8	14.3	5.6	19.9
1985–6																

[1] Preliminary. [2] End of Crop Year Season. *Source: Foreign Agricultural Service, U.S.D.A.* T.29A

BARLEY

World Production of Barley In Thousands of Metric Tons

Crop Years	China	United States	Austr-alia	Canada	Rep. of Korea	Den-mark	Moroc-co	France	India	Japan	USSR	W. Ger-many	Spain	Turkey	United King.	World Total
1978–9	7,000	9,776	4,006	10,387	1,348	6,301	2,326	11,321	2,311	326	62,077	8,608	8,608	4,750	9,850	182,600
1979–0	7,500	8,334	3,703	8,460	1,508	6,657	1,886	11,196	2,142	406	47,900	8,184	6,252	5,000	9,609	160,200
1980–1	7,600	7,859	2,682	11,259	859	6,044	2,210	11,758	1,624	375	43,400	8,826	8,705	5,300	10,326	164,000
1981–2	7,500	10,436	3,450	13,724	749	6,044	1,039	10,231	2,293	383	37,500	8,687	4,757	5,900	10,230	157,000
1982–3	6,900	11,233	1,939	13,966	780	6,387	2,334	10,190	2,012	390	41,000	9,460	4,900	6,000	10,884	164,500
1983–4[1]	6,900	11,081	4,937	10,296							54,200					169,000
1984–5[2]	6,900	12,988	5,475	10,252							40,500					172,700

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.* T.23

U.S. Barley Acreage and Prices

Year Beginning June 1	Acreage (Million Acres) National Program	Set-aside	Planted	Harvested for Grain	Yield per Harvested Acre In Bushels	Seasonal Prices: Received by Farmers[1]	Minneapolis No. 3 or Better: Feed[2]	Malting[3]	Portland No. 2 Western	Govt. Price Support Operations: National Avg. Loan Rate	Support or Target Price	Placed Under Loan (Mil. Bu.)	Total Payments to Participants (Mil. $)
						Dollars per Bushel							
1978–9	7.5	.8	10.0	9.2	49.2	1.92	1.80	2.38	2.10	1.63	2.25	67.6	97[9]
1979–0	7.8	.7	8.1	7.5	50.9	2.29	2.16	2.87	2.69	1.71	2.40	30.0	22[8]
1980–1	8.7	—	8.3	7.3	49.7	2.86	2.60	3.64	3.34	1.83	2.55	31.2	31[7]
1981–2	10.2	—	9.6	9.0	52.4	2.45	2.21	3.06	2.87	1.95	2.60	60.4	63[8]
1982–3	—	.4	9.5	9.0	57.2	2.23	1.76	2.53	2.52	2.08	2.60	89.0	60[10]
1983–4[4]	—	1.1	10.4	9.7	52.3	2.50	2.48	2.84	2.91	2.16	2.60		72[11]
1984–5[5]	—	.5	11.9	11.2	53.4	2.30	2.21	2.65	2.66	2.08	2.60		70[10]
1985–6[5]			12.4[12]										

[1] Excludes support payments. [2] Beginning June 1977, No. 2 Feed. [3] 60% to 70% plump or better. [4] Preliminary. [5] Estimate. [6] Available for total feed grains only. [7] Disaster payments. [8] Deficiency & disaster payments. [9] Deficiency, disaster & diversion payments. [10] Deficiency payments. [11] Deficiency & diversion payments. [12] Prospective plantings. *Source: Commodity Economic Division, U.S.D.A.* T.24

High, Low & Closing Prices of May Barley Futures at Winnipeg In Canadian Dollars per Tonne

Year of Delivery		Year Prior to Delivery: June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Delivery Year: Jan.	Feb.	Mar.	Apr.	May	Life of Delivery Range
1981	High	131.50	139.50	139.60	143.50	150.30	165.00	166.50	162.90	156.90	153.30	153.90	153.50	166.50
	Low	121.40	126.50	130.00	137.50	137.20	149.60	141.90	150.70	151.40	145.30	146.20	145.50	121.40
	Close	128.00	138.10	139.50	141.60	149.30	164.00	160.80	150.80	151.60	146.80	153.90	145.50	—
1982	High	144.00	144.20	141.90	133.10	134.70	133.00	130.80	133.20	132.90	128.20	125.50	133.00	144.2
	Low	133.60	136.20	128.50	127.50	129.00	127.00	126.60	128.80	126.80	118.00	121.30	121.80	118.0
	Close	134.60	142.30	131.00	129.50	132.90	127.50	129.10	131.50	127.00	125.30	122.00	125.80	—
1983	High	127.90	127.50	116.80	108.70	105.00	110.50	107.10	111.30	109.50	107.50	109.20	108.20	127.90
	Low	127.90	114.80	106.30	102.50	100.70	101.50	105.50	104.90	101.90	100.00	104.80	100.30	100.00
	Close	127.90	115.70	107.80	104.80	101.50	105.80	106.20	108.50	103.60	106.80	107.30	101.20	—
1984	High	109.00	110.50	131.00	142.10	141.00	138.00	137.00	137.00	133.00	132.00	134.60	149.00	149.00
	Low	107.30	107.50	116.20	128.50	128.80	132.30	131.70	131.80	124.80	128.30	127.60	132.10	107.30
	Close	107.50	110.50	128.60	137.20	134.00	133.90	136.20	132.60	128.90	132.00	133.00	142.00	—
1985	High	136.00	138.50	137.00	134.30	135.20	138.80	139.10	138.10	137.80	138.20			
	Low	130.10	124.30	129.80	129.70	132.20	133.80	136.50	136.20	130.40	134.00			
	Close	131.50	137.50	130.10	134.20	134.20	138.10	137.10	137.80	134.80	138.00			

Source: Winnipeg Commodity Exchange T.26

Production of Barley in the United States, by States In Millions of Bushels

Year	Arizona	California	Colorado	Idaho	Kansas	Minnesota	Oklahoma	Montana	North Dakota	Oregon	Pennsylvania	Utah	South Dakota	Washington	U.S. Total
1979	3.2	47.4	18.7	54.9	2.3	40.8	2.5	40.6	75.9	8.3	4.0	10.4	20.8	17.0	383.2
1980	4.5	44.1	15.9	59.0	2.1	34.6	1.7	44.1	48.0	10.1	3.8	10.8	15.2	32.3	361.1
1981	4.1	40.3	18.6	63.1	1.7	57.7	1.6	56.8	105.6	11.7	4.1	11.1	20.1	44.1	473.5
1982	3.8	38.4	15.9	75.9	2.5	51.0	1.1	76.4	103.4	15.5	3.4	12.9	23.4	49.4	515.9
1983	2.8	29.4	16.5	67.0	4.6	43.5	1.5	77.7	114.7	16.5	3.6	11.4	23.1	54.4	508.9
1984[1]	5.4	29.0	20.2	88.4	4.1	61.8	2.1	59.1	153.7	17.4	3.6	11.6	30.3	63.7	596.5

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.25

Average Cash Price[2] of No. 2 (or better) Feed Barley, in Minneapolis In Cents Per Bushel

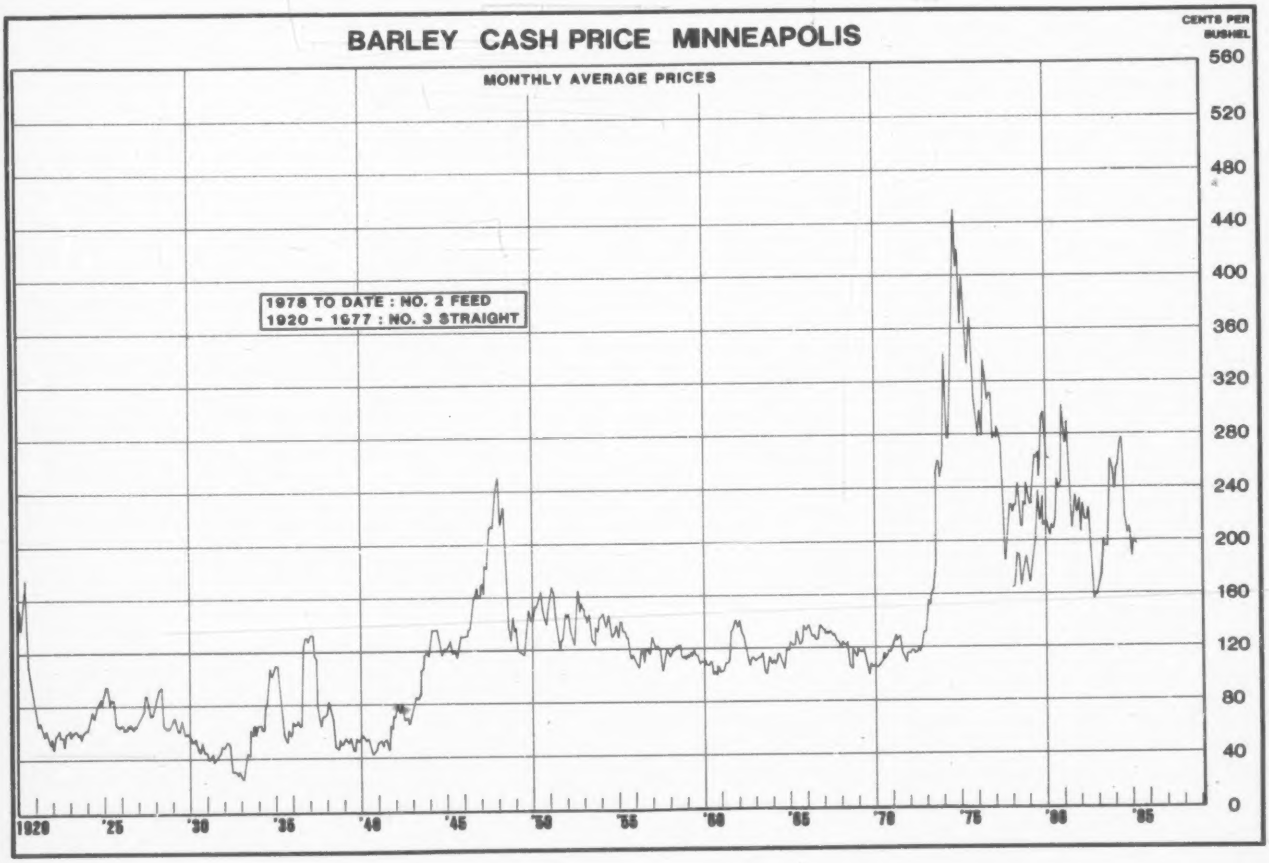
Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
1975-6	167	204	277	300	283	242	223	211	226	236	239	250	238
1976-7	262	245	248	268	246	221	205	220	235	229	228	213	235
1977-8	176[2]	163	150	158	166	165	165	165	165	166	191	190	168
1978-9	184	171	168	177	181	188	179	171	169	186	189	196	180
1979-0	216	239	215	222	234	211	215	209	204	206	212	209	216
1980-1	215	248	239	243	277	303	275	281	290	263	251	239	260
1981-2	209	226	235	221	226	231	206	220	227	216	216	224	221
1982-3	212	185	172	169	154	158	159	163	172	173	201	195	176
1983-4[1]	196	195	242	261	260	253	239	255	256	265	274	277	248
1984-5[1]	259	218	213	205	210	206	188	198	199				

[1] Preliminary. [2] Prior to June 1977 prices are for No. 3 or better. *Source: Economic Research Service, U.S.D.A.* T.27

Month End Open Interest of Barley Futures at Winnipeg In Contracts (20 Tonne)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	6,228	5,951	4,700	6,414	5,377	8,888	8,163	10,022	13,955	14,157	15,493	13,439
1979	16,704	18,864	18,579	23,142	17,635	23,336	26,643	25,193	24,230	20,466	22,107	21,468
1980	19,105	17,631	14,848	14,027	15,842	17,658	18,224	18,724	21,082	16,574	16,173	13,496
1981	14,560	13,335	13,836	16,380	14,252	12,968	15,101	16,620	16,086	10,971	10,591	8,832
1982	8,485	7,838	7,096	6,684	6,774	6,298	7,019	7,427	8,148	8,697	8,697	7,826
1983	9,952	10,972	9,535	10,458	11,064	12,592	12,688	18,486	19,110	17,099	15,083	10,673
1984	10,279	10,698	9,693	12,649	10,439	13,752	12,451	14,125	15,380	9,836	11,345	9,334
1985	10,984	11,828	9,622									

Source: Winnipeg Commodity Exchange T.28

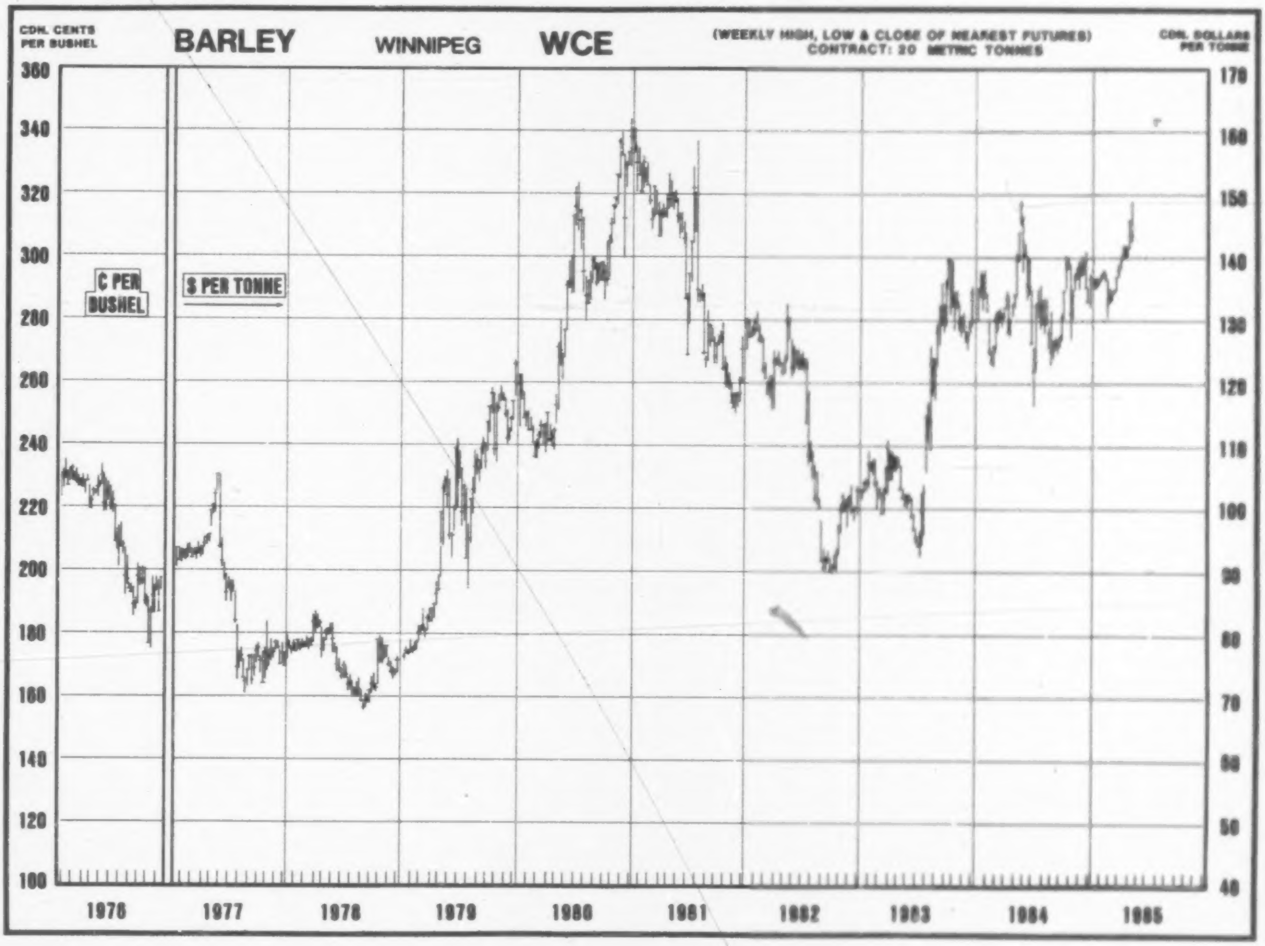


Salient Statistics of Barley in the United States In Millions of Bushels

Year & Periods Begin. June 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed & Residual	Total	Exports	Total Disapp.	Gov't. Owned[1]	Privately Owned[2]	Total Stocks
1977–8	126.4	427.8	9.4	563.6	6.0	133.1	16.7	177.5	333.3	57.2	390.5	—	173.1	173.1
1978–9	173.1	454.8	10.5	638.4	6.0	147.5	13.6	217.6	384.7	25.7	410.4	2.5	225.5	228.0
1979–0	228.0	383.2	11.8	623.0	7.0	150.9	14.0	204.2	376.1	54.8	430.9	3.2	188.9	192.1
1980–1	192.1	361.1	10.2	563.4	7.0	155.3	13.2	173.9	349.4	76.7	426.1	3.4	133.9	137.3
1981–2	137.3	473.5	9.6	620.4	6.9	150.9	16.3	198.4	372.5	100.1	472.6	3.3	144.5	147.8
1982–3	147.8	515.9	10.7	674.4	7.2	145.5	17.4	240.4	410.5	47.2	457.7	6.0	210.7	216.7
June–Sept.	147.8	515.9	5.1	668.8	2.5	51.3	1.3	92.2	147.3	25.4	172.7	3.9	492.2	496.1
Oct.–Dec.	496.1	—	1.9	498.0	1.8	32.1	2.8	40.7	77.4	6.5	83.9	4.8	409.3	414.1
Jan.–Mar.	414.1	—	2.2	416.3	1.8	35.5	3.9	68.5	109.7	12.7	122.4	5.8	288.1	293.9
Apr.–May	293.9	—	1.5	295.4	1.1	26.6	9.4	39.0	76.1	2.6	78.7	6.0	210.7	216.7
1983–4[3]	216.7	508.3	7.1	732.1	7.0	145.0	19.9	279.5	451.4	91.5	542.9	11.9	177.3	189.2
June–Sept.	216.7	508.3	3.4	728.4	2.5	53.8	1.2	132.0	189.5	23.4	212.9	9.3	506.2	515.5
Oct.–Dec.	515.5	—	1.5	517.0	1.7	29.8	2.4	83.2	117.1	32.9	150.0	11.4	355.6	367.0
Jan.–Mar.	367.0	—	1.2	368.2	1.7	35.2	3.9	33.9	74.7	25.1	99.8	12.0	256.4	268.4
Apr.–May	268.4	—	1.0	269.4	1.1	26.2	12.4	30.4	70.1	10.1	80.2	11.9	177.3	189.2
1984–5[4]	189.2	605.7	10.0	804.9		175.0		274.9	449.9	100.0	549.9			255.0
June–Sept.	189.2	605.7	3.6	798.5	2.5	52.7	1.2	128.9	185.3	29.7	215.0	10.0	573.5	583.5
Oct.–Dec.														

[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary. [4] Estimate. *Source: Commodity Economics Division, U.S.D.A.*

T.29



Bauxite

World mine production of bauxite in 1984 was nearly 4 percent above that of 1983, according to a preliminary estimate by the U.S. Bureau of Mines. World bauxite reserves are large, but domestic resources of bauxite are inadequate to satisfy long term U.S. demand. Bauxite is the only raw material used in the production of alumina on a commercial scale in the U.S. Alumina is an intermediate product in the aluminum production process. About 90 percent of the small domestic production and imported bauxite is processed into alumina. The remainder is used by the refractory, chemical, and abrasive industries. Nearly 90 percent of the alumina consumed in the U.S. is reduced to aluminum metal.

U.S. mine production of bauxite increased 19 percent in 1984, but foreign mines supplied about 93 percent of consumption in 1984. Average operating rates for domestic alumina plants increased to about 60 percent in 1984 from 40 percent in 1983, in response to increased demand for primary aluminum.

Crude and dried bauxite imports into the U.S. increased some 34 percent in 1984, with the greatest increases accounted for by Jamaica and Guinea. Imports of calcined refractory grade bauxite increased 62 percent over the 1983 level. Guyana supplied 58 percent of the refractory grade bauxite and China supplied 41 percent. Imports of other calcined bauxite (mainly abrasive grade) declined about 54 percent. Most of these imports came from Australia (57 percent) and China (42 percent).

Alumina imports (about 50 percent of supply), gained 11 percent in 1984. Canada, Jamaica, Surinam, and Venezuela were the principal suppliers.

It is estimated by the Bureau of Mines that 1985 domestic bauxite production will amount to about 950,000 tonnes and U.S. apparent consumption of bauxite and alumina, expressed as metric tons aluminum equivalent, will be about 4.6 million tonnes. From a 1981 base, apparent demand for primary aluminum and primary nonmetal supplies is expected to increase at an average annual rate of about 6.3 percent through 1990. Because of increasing metal imports and recycling of scrap metal, the growth rate for bauxite and alumina demand is expected to be considerably below the growth in demand for the metal.

As of November 30, 1984, the U.S. Stockpile goal for bauxite-abrasive grade was 1.02 million tonnes, with no inventory on hand. The bauxite-metal grade (Jamaica type) goal was 21.34 million tonnes and inventory 11.64 million, and Surinam type goal 6.20 million tonnes and inventory 5.39 million. The Stockpile goal for bauxite-refractory-grade, calcined, was 1.42 million tonnes and inventory 203 thousand tonnes.

World Production of Bauxite In Thousands of Metric[4] Tons

Year	Australia	Brazil	China	France	Greece	Guinea	Guyana[2]	Hungary	Indonesia	Jamaica[3]	Malaysia	Surinam	USSR[3]	U.S.[3]	Yugoslavia	World Total
1975	20,672	945	970	2,523	2,958	8,273	3,200	2,844	977	11,388	692	4,850	4,300	1,772	2,270	73,610
1976[4]	24,084	827	1,300	2,330	2,551	10,848	2,686	2,918	940	10,296	660	4,613	4,500	1,989	2,033	77,417
1977	26,086	1,120	1,500	2,059	2,885	10,841	2,731	2,949	1,301	11,390	616	4,805	4,600	2,013	2,044	81,931
1978	24,293	1,160	1,500	1,978	2,663	11,527	2,425	2,899	1,008	11,739	615	5,188	4,600	1,669	2,565	80,975
1979	27,583	2,388	1,500	1,969	2,812	11,326	2,312	2,976	1,052	11,618	387	5,010	4,600	1,821	3,012	85,522
1980	27,178	5,538	1,500	1,921	3,286	11,862	1,844	2,950	1,249	12,054	920	4,646	4,600	1,559	3,138	89,215
1981	25,541	5,770	1,500	1,824	3,216	11,112	1,681	2,914	1,203	11,682	701	4,100	4,600	1,510	3,249	85,523
1982[1]	23,625	6,289	1,500	1,662	2,853	11,827	1,430	2,627	700	8,361	589	3,059	4,600	732	3,668	77,793
1983[2]	24,500	7,000	1,500	1,716	2,900	11,080	1,791	2,917	750	7,300	460	1,750	4,600	679	3,500	76,016
1984[2]	25,000	7,500			3,200	12,000	1,900	2,900		6,900		1,700	4,600	811	3,600	78,800

[1] Preliminary. [2] Estimate. [3] Dry Bauxite equivalent of ore processed. [4] Data prior to 1976 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

T.30

U.S. Salient Statistics of Bauxite In Thousands of Metric[6] Tons

Year	Net Import Reliance as a % of Apparent Consumption	Av. Price F.O.B. Mine $ per Ton	Mine Production			Recovery[1] of Processed Bauxite			Dry Equivalent			Stocks, Dec. 31			
			Crude	Dried Equivalent	Value ($1,000)	Crude Ore Treated	Recovered[1] Total	Recovered[1] Dried Equiv.	Imports[2] (for Consumption)	Exports[2]	Consumption	Producers & Processors	Consumers	Govt.	Total
1975	91	5–15	2,199	1,801	25,083	361	182	287	11,714	20	12,587	494	5,293	15,308	21,094
1976	91	5–15	2,420	1,989	26,645	366	175	289	12,749	15	14,039	526	4,923	15,308	20,756
1977	91	5–15	2,436	2,013	27,555	419	169	294	12,989	26	14,528	685	7,264	15,087	23,036
1978	93	5–15	2,066	1,669	23,185	379	154	236	13,847	13	14,738	556	7,806	14,661	23,023
1979	93	5–15	2,186	1,821	24,875	466	235	336	13,780	15	15,697	620	7,958	14,661	23,239
1980	94	6–16	1,869	1,559	22,353	355	179	277	14,087	21	15,962	662	7,681	14,661	23,004
1981	94	8–20	1,847	1,510	26,489	419	187	328	12,802	20	13,525	897	7,395	14,661	22,953
1982[3]	96	8–20	896	732	12,334	234	120	184	10,122	49	9,217	614	6,548	16,326	23,488
1983[4]	96	13–20	826	679	11,309	293	140	225	7,601	74	8,966	548	4,991	16,326	21,865
1984	96	13–20		890					10,228			6,200			

[1] Calcined, or sintered. [2] Including concentrates. [3] Preliminary. [4] Estimate. *Source: Bureau of Mines*

T.31

3

I

Beer

United States Production of Beer (Fermented Malt Liquors) In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	9.96	10.38	12.62	12.53	13.25	14.21	13.18	13.06	11.41	11.24	9.93	9.59	141.34
1973	10.98	10.73	13.14	12.86	13.83	13.09	13.76	14.17	12.12	12.38	10.90	10.65	148.60
1974	12.19	10.98	13.05	13.09	14.71	15.04	15.75	14.61	12.67	12.28	10.71	11.11	156.20
1975	12.55	11.18	12.41	14.50	14.34	15.76	16.08	14.72	13.35	12.35	11.22	12.15	160.60
1976	12.44	11.89	11.86	13.69	15.18	15.76	16.54	16.10	14.31	13.42	11.29	11.19	163.66
1977	11.98	11.48	16.20	16.03	16.79	16.90	15.92	15.31	13.26	12.61	12.02	12.01	170.50
1978	12.87	12.71	15.86	15.62	16.57	16.88	16.74	17.61	14.63	14.01	12.71	12.87	179.66
1979	13.83	13.57	16.89	16.34	16.98	16.77	16.96	16.76	14.70	15.28	13.14	12.97	184.19
1980	14.64	14.91	16.56	16.54	17.97	17.93	18.69	18.02	16.29	15.64	13.56	13.32	194.08
1981	13.31	14.58	16.72	17.68	18.87	18.63	18.80	17.72	15.72	14.61	13.12	13.93	193.69
1982[2]	15.19	15.00	17.65	17.86	18.22	18.19	17.17	19.50	15.64	15.07	13.65	13.31	194.35
1983[2]	14.77	14.56	16.78	15.54	18.17	18.47	18.50	18.27	15.71	15.30	13.62	12.46	195.12
1984[2]	14.15	14.75	17.72	16.65	18.59	18.47	18.64	17.59	14.58	15.14			
1985													

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. [2] Preliminary. *Source: Internal Revenue Service*

T.32

Tax-Paid Withdrawals of Beer (Fermented Malt Liquors) in the U.S.
In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	8.62	9.09	11.69	11.09	12.41	13.12	12.22	12.89	10.89	10.61	9.92	9.27	131.81
1973	9.67	9.43	12.01	11.65	12.87	12.55	12.77	13.68	11.52	11.54	10.73	10.08	138.47
1974	10.97	9.87	11.82	11.74	13.76	13.86	14.73	13.89	12.09	11.59	10.42	10.74	145.46
1975	11.12	9.84	11.57	13.01	13.42	14.44	14.75	13.88	12.51	11.90	10.61	11.59	148.64
1976	10.86	11.00	10.99	12.91	13.59	14.16	15.01	14.86	13.44	12.22	10.52	10.83	150.39
1977	10.01	10.43	14.55	14.28	15.00	15.71	14.80	14.64	12.89	11.62	11.49	11.51	156.92
1978	10.69	11.01	14.20	13.60	14.96	15.82	15.29	16.28	13.72	12.99	12.04	11.57	162.71
1979	12.32	12.01	15.01	14.98	15.92	15.57	15.13	15.56	13.71	13.64	12.52	11.76	168.14
1980	12.54	12.64	14.08	14.33	16.19	16.66	17.08	16.28	14.51	14.16	12.51	12.38	173.37
1981	12.08	12.41	15.01	15.47	17.00	17.29	17.37	16.24	14.68	13.84	12.39	12.91	176.70
1982[2]	11.90	12.91	15.68	15.81	16.56	17.22	16.10	16.26	14.88	13.83	13.14	12.27	176.57
1983[2]	12.79	12.66	15.07	15.49	16.84	17.01	16.85	17.35	14.84	13.77	13.17	11.98	177.87
1984[2]	12.42	12.63	15.32	14.88	16.67	17.23	16.90	16.97	13.66	14.29			
1985													

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. [2] Preliminary. *Source: Internal Revenue Service*

T.33

U.S. Stocks of Beer (Fermented Malt Liquors) at End of Month In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	12.97	13.64	13.82	14.51	14.45	14.40	14.49	13.76	13.54	13.36	12.77	12.44
1973	13.07	13.70	14.01	14.43	14.48	14.20	14.30	13.81	13.58	13.52	12.93	12.76
1974	13.17	13.56	13.92	14.32	14.31	14.47	14.33	14.04	13.72	13.53	13.04	12.58
1975	13.21	13.54	13.76	14.26	14.17	14.30	14.45	14.18	13.98	13.48	13.20	12.74
1976	13.39	13.33	13.31	13.06	13.53	13.89	14.03	13.92	13.60	13.69	13.48	12.91
1977	14.01	14.17	14.58	15.03	15.57	15.37	15.13	14.45	13.58	13.53	13.02	12.42
1978	13.92	14.07	14.56	15.01	14.99	14.55	19.81	14.33	14.01	13.71	13.50	13.76
1979	14.00	14.06	14.44	14.98	14.74	14.50	14.83	14.30	13.87	12.59	13.37	13.29
1980	13.33	14.07	14.84	15.31	17.44	15.43	14.[illegible]1	15.13	15.01	14.70	14.36	13.96
1981	13.98	14.95	15.12	15.26	15.78	15.24	14.98	14.53	14.42	13.99	13.38	12.95
1982[2]	14.16	14.93	16.32	15.83	15.59	15.28	14.45	14.31	13.99	14.00	13.43	13.22
1983[2]	13.89	14.46	16.05	16.21	15.84	15.82	15.73	14.98	14.53	14.30	13.92	13.26
1984[2]	13.70	14.17	15.24	15.55	15.87	15.67	14.88	14.44	13.69	13.75		
1985												

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. [2] Preliminary. *Source: Internal Revenue Service*

T.34

Bismuth

World production of bismuth (which is produced from the treatment of lead ores and bullion) continued its declining trend of recent years, dropping an additional 9 percent in 1984 in response to generally reduced world demand, according to a preliminary estimate of the U.S. Bureau of Mines. U.S. production is insignificant, with the single producing plant operating well below its estimated capacity. A minor amount of secondary bismuth is produced from bismuth scrap. Most domestic requirements are met by imports.

U.S. imports of bismuth in 1984 were about 1 percent lower than in 1983, according to preliminary date of the U.S. Bureau of Mines. Significant reductions in imports from Peru and Mexico (the two major suppliers) were not quite offset by increased imports from Canada, South Korea, and the United Kingdom. U.S. exports of bismuth (including alloys, waste and scrap) increased nearly 2 percent. The United Kingdom, Switzerland, and West Germany were the major destinations of U.S. exports in 1984.

Consumption of bismuth in the U.S. soared 40 percent in 1984, with the greatest increase registered by its consumption in metallurgical additives which accounted for 30 percent of total use in 1984. Several large consumers were added to the Bureau of Mines canvass during 1984, but the gain also reflected increased demand for malleable iron castings, which had been adversely affected in the previous year by lowered consumption in the major capital goods markets. Chemical use (which includes pharmaceuticals, industrial and laboratory chemicals and cosmetics), and accounts for close to 48 percent of total consumption, rose 40 percent in 1984. Fusible alloys, which accounted for 21 percent of total consumption, increased 9 percent in 1984.

U.S. industry stocks of bismuth on December 31, 1984 totaled 518,103 pounds, 10 percent lower than a year earlier. As of November 30, 1984, the National Defense Stockpile held 2.08 million pounds versus a stockpile goal of 2.2 million—both unchanged from a year earlier.

U.S. consumption of bismuth in 1985 is forecast by the Bureau of Mines at 2.7 million pounds. Demand for bismuth is expected to increase at an average annual rate of about 1.7 percent through 1990, from a 1978 base. The steel industry in 1984 continued to experiment with free-machining alloy bar steels that used bismuth as an additive. Research was also conducted on bismuth usage as a smoke and fire retardant and in electrical applications.

The domestic bismuth producer price remained suspended in 1984. However, a major foreign producer's bismuth price rose from $2.30 per pound steadily throughout most of the year to a peak of $6.50 per pound in late October, reflecting production problems in some major source countries as well as increased demand. The U.S. dealer price rose from about $1.75 per pound at the start of the year to as high as $6.70 at the end of December.

World Mine Production of Bismuth In Thousands of Pounds

Year	Romania (Ore)	Australia (concentrates)	Bolivia (concentrates)	Canada	China (Ore)	France (Metal)	South Korea (Metal)	Yugoslavia (Metal)	Japan (Metal)	Mexico (Metal)	Peru (Metal)	W. Germany (Ore)	USSR (Metal)	World Total
1976	180	1,650	1,349	286	485	139	384	172	1,502	1,228	1,149	24	130	8,689
1977	180	2,054	1,435	363	500	115	293	163	1,538	1,607	1,420	24	140	9,872
1978	180	2,324	677	320	530	N.A.	269	29	1,375	2,156	1,347	20	150	9,412
1979	180	2,200	22	306	570	N.A.	192	51	1,010	1,662	1,162	22	160	7,548
1980	180	2,650	24	377	570	N.A.	271	183	745	1,698	1,096	0	160	7,954
1981	180	2,579	24	370	570	N.A.	220	108	1,054	1,446	1,409	0	170	8,130
1982[1]	180	3,395	11	417	570	N.A.	209	108	1,071	1,336	1,332	0	170	8,799
1983[2]	180	3,310	10	440	570	N.A.	200	110	1,260	1,320	1,350	—	180	8,935
1984[2]		3,200	—	400			200		1,200	1,000	1,000			8,100

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

T.35

U.S. Salient Statistics of Bismuth In Thousands of Pounds

Year	Bismuth Consumed, By Uses							Consumer Stocks Dec. 31	Exports of Metal & Alloys	General Imports of Metallic Bismuth from				Price[1] $ Per Pound
	Experimental	Metallurgical Additives	Other Alloys	Fusible Alloys	Chemicals[4]	Other Uses	Total Consumption			Peru	Mexico	Japan	Total	
1976	8.8	455.9	20.3	518.6	1,391.7	15.3	2,410.6	483.8	68.5	569.1	248.1		2,328.1	7.50
1977	.6	461.6	18.6	611.2	1,274.5	13.1	2,379.6	436.1	95.3	632.4	182.2		2,013.3	6.01
1978	.6	485.3	21.8	836.0	1,149.7	18.6	2,511.9	781.9	96.3	334.7	535.3		2,657.8	3.38
1979	3.2	703.8	22.0	721.0	1,248.7	28.5	2,727.2	629.7	427.8	648.7	604.8	185.5	2,167.3	3.01
1980	1.2	467.9	26.5	650.9	1,115.6	26.7	2,288.8	674.0	128.7	619.1	860.4	138.4	2,217.4	2.64
1981	.2	307.0	26.0	657.0	1,387.6	15.0	2,392.7	509.0	78.7	859.3	724.1	124.1	2,436.2	2.30
1982	.5	124.6	21.4	571.6	1,144.8	13.6	1,876.4	541.6	52.8	864.1	699.5	41.4	2,026.2	2.30
1983[2]	1.7	522.8	20.0	622.8	1,103.7	14.3	2,285.3	577.5	306.1	653.7	706.6	68.3	1,972.0	2.30
1984[3]	1.7	955	20.0	680	1,545	9.2	3,210	518.1	311.5	391.8	430.5	209.2	1,948.4	2.3–6.5

[1] N.Y., average ton lots; effective Oct. 1981, domestic producers' list price was suspended. Major foreign producer price is recorded. [2] Preliminary. [3] Estimate. [4] Includes pharmaceuticals. *Source: Bureau of Mines*

T.36

Broilers

Because of weakening prices for feed ingredients and lowered output of red meat, broiler production was expected to increase during 1985, bringing lowered prices for broilers. The production of broiler meat in federally inspected plants in the first of 1984 was only 1 percent above year-earlier levels, and this small rise in output along with a surge in demand sent broiler prices sharply higher. The resulting improved returns to producers were an incentive for expanded production in the second half of 1984. Because of low returns in 1983 and cost-cutting measures that reduced hatchery supply flocks, egg settings during the second and third quarter of 1984 were generally below expected levels. As a result, producers were forced to hold hens longer in order to obtain additional hatching eggs. Placements were below year-earlier levels through third-quarter 1984, but placement figures began to improve during the last quarter of 1984. By May 1985, hatchery supply flock placements were expected to be above 1984 levels.

Lower placements and less selectivity in incubating eggs may have accounted for less viable hatchings of eggs through August 1984 vs. a year earlier. Average slaughter weights were higher in 1984, partly due to the cooler-than-normal summer weather. Because of heavier weights, the output of broiler meat in the third quarter of 1984 was up 6 percent from 1983. Despite smaller cumulative placements compared to a year earlier, producers were likely to have plentiful supplies of hatching eggs, and 1984 broiler meat output was estimated to have increased 8 to 10 percent over 1983.

Broiler Supply and Prices in the United States

Year & Quarters	Federally Inspected Slaughter				Total Production RTC[2] (Mil. Lbs.)	Per Capita Consumption (Lbs.)	Prices (Cents/Lb.)	
	Number (Mil.)	Avg. Wt. (Lbs.)	Liveweight Pounds (Mil. Lbs.)	Certified RTC Wt. (Mil. Lbs.)			Farm	City[4]
1980	3,915	3.93	15,409	11,175	11,334	47.0	27.7	46.8
1981	4,076	4.01	16,350	11,906	11,981	48.6	28.5	46.3
1982[1]	4,068	4.04	16,456	12,039	12,175	50.0	26.9	44.0
1983[1]	4,133	4.09	16,984	12,389	12,389	50.8	29.2	50.4
I	1,022	4.10	4,186	3,061	3,082	12.6	26.3	43.4
II	1,084	4.13	4,473	3,276	3,350	13.5	26.4	45.6
III	1,062	4.00	4,254	3,135	3,335	12.9	32.1	53.9
IV	965	4.13	3,981	2,917	3,180	11.9	32.0	54.6
1984[3]	4,713		17,867	13,067	12,948	52.0	33.4	55.5
I	1,015	4.16	4,225	3,082	3,275	12.7	37.4	61.8
II	1,092	4.16	4,574	3,350	3,500	13.7	33.8	56.4
III	1,106	4.13	4,568	3,335		13.6	32.7	54.1
IV							29.6	49.5

[1] Preliminary. [2] Total production equals fed, inspec. slaughter plus other slaughter minus cut-up & further processing condemnation. [3] Forecast. [4] 9-city weighted average. *Source: Commodity Economics Division, U.S.D.A.* T.38

Salient Broiler Statistics in the United States

Year	Commercial[2] Production		Average		Value of Production Mil. $	Total Chickens[2] Supply & Distribution (In Millions of Pounds)					Consumption	Civilian	
	Number Millions	Live weight Mil. Lbs.	Live weight Per Bird Lb.	Farm Price ¢ Lb.		Commercial Broilers	Other Chickens	Total	Storage Stocks Jan. 1	Exports & Shipments	Military	Total	Per Capita in Lbs.
1980	3,964	15,544	3.95	27.7	4,304	11,357	752	12,109	142	781	38	11,295	50.1
1981	4,150	16,530	4.01	28.5	4,703	11,992	743	12,736	136	920	36	11,767	51.7
1982[1]	4,068	16,456	4.04	26.9	4,427	12,039	745	12,784	149	675	36	12,222	53.2
1983[1]	4,133	16,984	4.09	29.2	4,959	12,400	715	13,115	135	592	36	12,511	53.8
1984[1]	4,213	17,867	4.15	33.4	5,968	12,767	690	13,457	113	557	39	12,842	54.8

[1] Preliminary. [2] Ready-to-cook basis. *Source: Economic Research Service, U.S.D.A.* T.39

Average Wholesale Broiler[1] Prices RTC In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.	4-Region Ave. Retail Price	Hens 8–16 Lbs. (New York)[2]
1980	45.8	42.7	40.5	38.9	41.1	43.3	52.8	52.4	54.8	51.4	49.7	48.6	46.8		62.6
1981	49.5	50.3	48.2	44.4	46.3	49.3	50.2	47.3	43.6	43.7	42.5	40.1	46.3	73.7	59.7
1982	45.2	44.5	44.8	42.6	45.8	47.0	46.1	43.4	43.6	42.3	40.3	42.0	44.0	71.6	60.8
1983	43.1	45.2	41.9	40.9	46.9	49.1	52.8	54.2	54.5	50.4	56.3	57.1	49.4	72.8	60.5
1984	62.1	61.2	62.0	56.0	57.6	55.5	57.3	51.5	53.6	48.8					

[1] Ice packed, ready-to-cook. [2] In retail stores (urban areas), whole or cut-up ready to cook. *Source: Bureau of Labor Statistics* T.37

Burlap and Jute

Average Wholesale Price of Raw Jute, Bang Tossa C., Landed, at New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	29.0	28.5	29.0	29.0	28.8
1981	N.A.	27.35	27.35	N.A.	29.0	N.A.	29.0	29.0	29.0	29.0	24.0	22.55	27.30
1982	23.50	23.40	23.15	24.50	N.A.	N.A.	23.20	25.50	25.50	25.50	25.50	25.50	24.53
1983	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50	25.50
1984	25.50	25.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	47.50	N.A.	30.41
1985	N.A.	N.A.											

Source: Bureau of Labor Statistics (0155-0231.01) T.41

Average Wholesale Price of Burlap (40 Inch—10 Oz.) at New York In Cents Per Yard

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	N.A.	39.8	40.0	38.5	N.A.	N.A.	N.A.	N.A.	33.5	33.5	N.A.	33.0	36.4
1981	N.A.	27.35	27.35	N.A.	29.0	N.A.	29.0	29.0	29.0	29.0	24.0	22.55	27.36
1982	23.50	23.40	23.15	24.50	N.A.	23.30	23.20	23.35	25.25	26.75	25.50	24.30	23.29
1983	22.65	24.25	26.35	26.20	24.40	25.20	24.75	25.50	26.25	26.95	29.65	31.70	26.15
1984	31.25	30.55	30.55	30.55	29.70	29.70	32.85	33.85	36.05	37.95	39.85	39.40	33.52
1985	39.60	37.25											

Source: Bureau of Labor Statistics (0337-0461.01) T.42

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Butter

It was estimated by trade sources that world production of butter and butteroil in 1984 would total about 6.7 million tons, 2 percent below 1983. The 1984 butter output from the EC was expected to decline because of continued milk production cuts. It was forecast that, during the October-September period of 1984/85, EC butter output would total 1.6 million tonnes vs. 1.8 million a year earlier.

Preliminary estimates put 1984 world ending stocks of butter at 1.69 million tonnes compared with 1.45 million for 1983. EC ending stocks of butter in 1984 totaled 1.22 million tonnes, or just over 70 percent of total world ending stocks. It was estimated in the third quarter of 1984 that EC ending stocks increased at about 12,000 tonnes a month due to EC subsidies of butter production. In order to reduce its huge butter surpluses, the EC in mid-1984 approved the sale of butter at reduced prices to both the Soviet Union and the Middle East despite the objections of Britain, Denmark, Italy, and the Netherlands. The EC hoped that this move would help remove 150,000 tonnes of older butter from the 1 million tonnes of surplus. New Zealand, another major butter producer whose production accounts for about 4 percent of 1984 world output, also objected to the sale of EC butter at reduced prices saying that the sale could drop world butter prices to around $850 a tonne, well under the official GATT price of $1,200 a tonne f.o.b. exporting country. The EC's butter surplus reduction plan also included a kind of export subsidy whereby exporters who sold 50,000 tonnes of butter to the Soviet Union at world prices would receive an option to sell the same amount of 18-month-old butter at $450 per tonne, nearly a third of the official price. It was stipulated that this older butter would likewise be exported to the Soviet Union. It was estimated that EC stocks of older butter amounted to about 250,000 to 300,000 tonnes. Along with subsidized butter exports, the EC hoped to reduce surpluses with a low-priced sale of butter to EC customers. This so-called "Christmas Sale" was in part a move to extend to EC consumers the bargain prices being offered to the Soviets.

Because of the subsidized EC butter sale, the U.S. in mid-December 1984 notified the GATT of its intention to withdraw from the International Dairy Agreement (IDA). However, most countries, including Australia and New Zealand apparently were reconciled to the sale when the GATT Dairy Council ruled that other exporters could likewise sell butter below the IDA minimum in order to protect their interests. It was also decided that the EC sale would be a one-time affair.

Trade sources estimated that, in the October-September 1984/85 period, U.S. butter output would decline to 400,000 tonnes compared with 434,000 tonnes a year earlier. This was attributed to the U.S. government's reduced milk price and to the offering of a paid diversion program to milk producers. Preliminary figures showed that, in calendar 1984, U.S. butter production of 250,000 tonnes amounted to just over 8 percent of the world total. The U.S. imported only 4,000 tonnes of butter during 1984, while U.S. butter exports totaled 55,000 tonnes. Total butter consumption in the U.S. was 512,000 tonnes.

In carrying out its butter support program the Commodity Credit Corporation (CCC) of the USDA offers to purchase carlots of butter in bulk containers at announced prices. In the 1984/85 marketing year, the announced price for butter (U.S. Grade A or higher, New York, 64 or 68 pound blocks) in bulk containers was $1.4625 per pound. The CCC also purchased butter in special forms or in consumer-sized packages by competitive bids.

In the 1983/84 marketing year, net purchases of butter delivered to the CCC totaled about 239 million pounds—gross purchases of 242 million minus 2 million pounds that were sold for unrestricted use. When CCC inventories of dairy products are significantly large, sales for unrestricted use are intended to prevent prices from rising above the CCC's sale prices. CCC utilization of butter exceeded purchases for the 1984/85 marketing year. Roughly 325 million pounds of butter were used in domestic donation programs. Donations of butter for feeding programs under P.L. 480 amounted to 4 million pounds. Foreign donations under Section 416 totaled 105 million pounds of butter, 37 million pounds of which were used as butteroil. Under barter agreements with Jamaica, 7 million pounds of butteroil and 57 million pounds of non-fat dry milk were traded for bauxite.

At the end of September, 1984, the CCC had uncommitted inventories of 255 million pounds of butter. Uncommitted inventories of butter as of the end of November 1984 totaled 213.5 million pounds vs. 363.1 million pounds a year earlier.

Supply and Distribution of Butter in the United States In Millions of Pounds

	Supply					Distribution								93 Score Wholesale Prices	
	Production					Domestic Disappearance				Dept. of Agr.					
						Civilian									
Year	Creamery	Farm	Total	Cold Storage Stocks[1] Jan. 1[2]	Imports	Total	Per Capita —Lbs.—	Military	Exports & Shipments[4]	Jan. 1 Stocks[5]	Dec. 31 Stocks[5]	Removed by U.S.D.A. Programs	Total Use	Calif. AA	Chi. AA
														$ Lb.	
1978	994	—	994	185	2	966	4.4	3	5	151	192	112	974	1.2666	1.1058
1979	985	—	985	207	2	1,005	4.5	6	5	192	153	82	1,016	1.4327	1.2374
1980	1,145	—	1,145	178	2	1,012	4.5	5	3	153	268	257	1,020	1.6135	1.4079
1981	1,228	—	1,228	305	3	982	4.3	4	121	268	382	352	1,107	1.6855	1.4897
1982	1,257	—	1,257	429	3	1,050	4.6	20	153	382	439	382	1,222	1.7187	1.4839
1983	1,299	—	1,299	467	3	1,177	5.1	16	77	439	464	413	1,270		
1984[3]			1,120	499	3		5.0			464		203			
1985[3]				297											

[1] Commercial. [2] Includes stocks held by U.S.D.A. [3] Preliminary. [4] Includes U.S.D.A. shipments to Territories. [5] Includes butteroil. *Source: Department of Agriculture*

T.43

World (Total) Butter[1] Production In Thousands of Metric Tons

Year	Australia	Brazil	Canada	China	Czechoslovakia	Argentina	Denmark	France	Ireland	W. Germany	Netherlands	N. Zealand	India	Poland	Sweden	USSR	South Africa	Un. Kingdom	United States
1977	118		113	94		30	131	551	105	535	179	263	457		61	1,500	21	134	493
1978	112		102	94		29	140	553	130	564	216	230	460	294	63	1,472	16	161	451
1979	105		106	95		32	131	596	132	568	202	255	475	293	65	1,409	18	161	447
1980	84	100	111	95	128	29	113	618	124	578	179	265	480	294	66	1,388	17	168	519
1981	79	60	125		127	32	108	599	125	545	183	247	620	260	64	1,318	15	170	557
1982	76	70	134		138	37	121	624	140	556	216	248	650	265	70	1,403	17	216	570
1983[2]	88	70	104		149	32	131	637	158	627	271	241	670	300	73	1,562	18	240	589
1984[3]	111	70	105		155	29	101	612	166	570	234	290	690	322	79	1,580	17	195	520

[1] Factory (including creameries and dairies) & farm. [2] Preliminary. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.44

Production of Creamery Butter in Factories in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1977	105.5	95.4	98.4	99.9	103.2	93.0	81.8	77.8	75.0	84.5	81.5	89.5	1,086
1978	107.4	95.5	98.2	97.2	97.6	85.1	71.4	63.2	64.0	70.6	66.5	77.7	994.3
1979	98.4	86.7	89.8	92.4	99.2	83.0	72.5	64.3	60.5	78.0	75.8	84.0	984.6
1980	105.7	99.9	101.1	112.2	116.6	93.9	83.7	75.3	77.0	91.4	84.7	103.6	1,145
1981	123.1	108.4	115.5	117.3	115.5	95.9	82.7	82.3	85.2	99.5	93.4	109.5	1,228
1982	127.3	115.9	123.4		334.0			256.4			300.0		1,257
1983[1]	133.9	120.7	126.1	126.5	121.1	109.6	94.7	84.6	84.7	100.5	98.1	109.6	1,299
1984[2]	125.0	113.0	111.1	106.2	105.9	80.3	72.8	70.6	69.1	86.5	81.1	97.3	1,119

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.* T.45

Commercial Disappearance of Creamery Butter in the U.S. In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1977	71.9	53.9	83.6	65.0	56.3	44.8	71.6	72.8	89.1	81.5	74.0	94.3	859.8
1978	68.1	65.9	92.0	79.2	61.0	77.5	68.7	69.8	83.8	72.8	77.4	87.4	903.5
1979	83.1	78.3	88.5	70.7	64.2	68.1	72.5	66.2	63.4	78.4	84.4	78.7	895.0
1980	75.0	86.1	88.8	47.7	54.2	59.4	73.2	78.8	77.3	66.3	78.1	93.5	878.8
1981[1]		188.9			214.2			222.9			243.2		869.2
1982[1]		211.4			217.6			217.3			251.0		897.3
1983[1]		209.5			198.6			217.0			256.6		881.7
1984[1]		200.3			224.8			217.7			257.1		899.9

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.46

Cold Storage Holdings of Creamery Butter in the U.S., on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	184.9	195.7	215.9	235.8	246.2	264.6	282.0	297.7	284.6	266.7	251.8	228.9
1979	206.9	206.7	214.7	210.1	218.2	239.1	260.1	257.3	238.5	218.0	200.4	182.1
1980	177.8	191.0	205.6	217.2	238.1	281.7	295.9	308.0	306.4	302.9	301.5	302.7
1981	304.6	332.1	372.3	407.4	450.4	473.6	507.5	515.5	515.6	489.5	470.0	451.1
1982	429.2	430.3	440.4	447.8	—	—	541.6	—	—	510.0	—	—
1983	466.8	485.4	522.0	529.1	555.7	576.1	589.6	588.4	581.8	552.3	523.9	506.7
1984	499.4	510.6	532.5	529.3	532.4	538.5	516.7	489.6	462.7	426.3	374.3	335.9
1985[1]	296.6	277.3	284.5									

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.47

Wholesale Price of 92 Score Creamery (Grade A, Bulk) Butter at Chicago In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	100.7	100.7	101.2	105.2	106.7	106.7	107.9	116.7	115.8	115.6	121.1	118.8	109.8
1979	111.3	111.3	114.1	120.7	121.8	121.8	122.7	128.7	127.8	128.8	130.0	130.2	122.4
1980	130.2	130.3	130.4	134.3	136.9	139.0	139.3	144.5	145.1	147.1	147.6	147.7	139.3
1981	147.3	147.3	147.3	147.3	147.3	147.5	147.9	148.0	148.5	150.6	148.9	148.1	148.0
1982	147.5	147.5	147.8	147.4	147.3	147.3	147.6	148.1	148.4	147.4	148.2	147.9	147.7
1983	147.3	147.3	147.3	147.3	147.3	147.3	147.8	151.0	147.6	147.3	143.1	143.1	147.3
1984	140.4	141.3	142.1	142.9	142.9	150.0	155.6	150.6	158.1	158.1	158.1	145.6	148.8
1985	141.5	141.3											

Source: Economic Research Service, U.S.D.A. T.48

Cadmium

Cadmium is recovered as a byproduct of zinc ore processing and is used in its metallic form for plating and alloying.

U.S. refinery production of cadmium metal (primary and secondary) increased nearly 50 percent in 1984, but still fell short of domestic demand, according to preliminary data of the U.S. Bureau of Mines. Production of sulfide increased 8 percent and production of other compounds was up 39 percent from the 1983 output.

Imports of cadmium metal declined about 13 percent in 1984 as a drop in imports from Australia and a lesser reduction from Canada, the main supplier, more than offset increases for West Germany, South Korea and Norway.

Domestic shipments of cadmium metal in 1984 increased nearly 13 percent, according to Bureau of Mines data while compound shipments rose about 26 percent. The estimated consumption pattern for cadmium in 1984 was; coating and plating—35 percent; batteries—25 percent; pigments—20 percent; plastics and synthetic products—15 percent; alloys and other uses—5 percent. The usage of cadmium in nickel-cadmium batteries is believed to have the highest growth potential. Also, research has provided potential new uses for cadmium sulfide and cadmium telluride in solar photovoltaic cells.

U.S. exports of cadmium metal dropped about 38 percent in 1984 to 106 metric tons, reflecting reduced shipments to France, Belgium, Nigeria and the United Kingdom.

U.S. stocks held by producers at the end of 1984 were only about 4 percent below beginning stocks, while compound producer stocks increased about 8 percent.

The New York dealer price for cadmium metal began 1984 at $0.90 to $0.95 per pound and increased to $1.55 to $1.65 per pound and then increased further to $1.75 to $1.80 by mid-May. Prices sagged to $1.25 to $1.30 by the end of the third quarter and dropped to $1.11 to $1.15 by the end of the year.

The U.S. stockpile goal for cadmium, as of November 30, 1984, was unchanged from a year earlier at 5,307 metric tons, as was total inventory at 2,871 tonnes, according to Bureau of Mines data.

World Smelter Production of Cadmium Metal In Metric Tons

Year	Australia[4]	Belgium	Canada[4]	Finland	France	W. Germany	Italy	Japan	Mexico[4]	Norway	Poland	Un. King.	USSR	United States[3]	Zaire	World Total
1976	649	1,200	1,314	428	532	1,275	436	2,500	710	80	750	190	2,700	2,047	266	16,998
1977	670	1,440	1,185	527	790	1,336	448	2,844	908	97	754	295	2,750	1,999	246	18,288
1978	747	1,164	1,265	611	694	1,182	378	2,531	897	120	761	291	2,800	1,653	186	17,310
1979	804	1,440	1,455	590	689	1,266	527	2,597	830	115	773	424	2,850	1,823	212	18,679
1980	1,012	1,527	1,303	581	789	1,194	568	2,173	778	130	698	375	2,850	1,578	168	18,231
1981	1,031	1,176	1,298	621	663	1,192	482	1,977	590	117	580	278	2,900	1,603	230	17,364
1982[1]	1,010	1,100	809	566	803	1,030	515	2,034	607	104	570	354	2,900	1,007	281	16,452
1983[2]	1,000	1,100	1,107	566	790	1,000	500	2,200	900	104	570	380	3,000	1,052	285	17,244
1984[2]	1,000	1,100	1,100					2,200	900					1,500		17,600

[1] Preliminary. [2] Estimate. [3] Primary & secondary metal. [4] Refined. *Source: Bureau of Mines* T.49

Salient Statistics of Cadmium in the United States In Metric Tons of Contained Cadmium

Year	Net Import Reliance as a % of Apparent Consumption	Production				Imports (for Consumption)			Price[5] $ per lb.	Exports Cadmium Metal, Alloys, Dross,		Consumption[4]	Stocks, Dec. 31		
		Primary											Industry		
			Producers												
		Metallic	Shipments	Value Mil. $	Cadmium Sulfide[3]	Metallic	Flue Dust[3]	Total		Flue Dust	Value Ths. $		Metallic	Compounds	Distributors
1975	41	1,990	742	4.2	895	2,375	314	2,689	3.36	180	589	3,055	1,881	121	
1976	64	2,047	2,707	10.5	729	3,094	223	3,317	2.66	229	713	5,381	1,242	148	
1977	51	1,999	1,837	7.1	639	2,332	13	2,345	2.96	107	316	3,818	1,452	72	255
1978	63	1,653	1,957	5.9	698	2,881	—	2,881	2.45	326	864	4,510	1,152	45	296
1979	64	1,823	2,468	9.5	813	813	—	2,572	2.76	211	550	5,099	517	52	327
1980	55	1,578	1,271	5.2	801	2,617	—	2,617	2.84	236	464	3,534	841	42	439
1981	63	1,603	1,382	3.8	527	3,090	—	3,090	1.93	239	332	4,378	1,077	68	215
1982	73	1,007	1,832	2.6	374	2,305	—	2,305	1.11	11	126	3,728	635	167	150
1983[1]	72	1,052	1,495	1.8	670	2,196	—	2,196	1.13	170	351	3,763	209	49	91
1984[1]	56	1,553	1,685		725	1,898	--	1,898	1.70	106		3,400	201	91	4

[1] Estimate. [2] Preliminary. [3] Cd content. [4] Apparent Primary cadmium in all forms. [5] Sticks & Balls in 1 to 5 short ton lots. *Source: Bureau of Mines* T.50

Castor Beans

World production of castorseed in the 1984/85 season (October/September) was estimated by *Oil World* in late 1984 at 1.0 million metric tons, 11 percent larger than estimated 1983/84 production and the second highest production on record. Production in India, the world's largest producer was expected to increase by about 10 percent to around 385,000 tonnes. The bulk of India's harvest occurs in the December-May period. Estimated production in Brazil, which appears to have regained its former position as the second largest producer, was expected to increase sharply from the previous season's relatively low output, to around 250,000 tonnes. Most of Brazil's crop is harvested in the May-September period. A slight reduction in production by China was expected, from the relatively high output in the previous season.

Castor oil production worldwide was expected by about 7 percent in 1984/85 to around 380,000 tonnes, and the highest level in recent years. Most of the increase was expected to take place in Brazil followed by India. World stocks of castor oil at the start of the 1984/85 season were estimated to be about 12 percent larger than at the start of the previous season, and total supplies were expected to be the largest in several years.

World exports of castor oil were expected to increase by about 11 percent in 1984/85 from the previous season's exports of 156,000 tonnes. Brazil was expected to account for most of the increase in exports, followed by India. Major importers of castor oil from India are the USSR, West Germany, the Netherlands, France, Britain and the U.S. Imports of castor oil by the U.S. in the October/September 1983/84 season amounted to 38,986 tonnes, 33 percent larger than the 29,279 tonnes imported during the preceding season. While Brazil remained the most important source of U.S. imports in 1983/84, the largest increase from the previous season was accounted for by India.

The domestic use of castor oil in India in 1984/85 was expected to increase significantly, partly because of its relatively attractive price compared to some other oils, and also because of the ban on tallow imports for religious reasons.

World stocks of castor oil on October 1, 1985 were expected to increase to more than 100,000 tonnes, the highest in several years, in response to a greater increase in expected production than in projected disappearance.

World Production of Castor Beans In Thousands of Metric Tons

Crop Year	China	Brazil	Ecuador	Ethiopia	India	Romania	Paraguay	Israel	Mexico	Pakistan	Thailand	USSR	Philippines	Sudan	World Total
1979–0	109	325	8	2	260	5	23	8	6	18	26	62	18	5	899
1980–1	113	281	11	1	204	3	21	8	3	18	35	31	23	5	780
1981–2[1]	137	280	8	1	310	5	17		6	18	36	30	19	3	896
1982–3[1]	156	192	5	1	345	8	20		5	26	34	50	14	2	883
1983–4[2]	179	172	6	1	350	6	18		5	22	36	60	18	2	901
1984–5[2]	175	250	6	1	385	6	17		5	22	33	55	19	2	1,001

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* "The Oil World." T.51

Castor Oil Consumption[1] in the United States In Thousands of Pounds

Crop Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1982–83	5,143	6,486	6,307	6,551	7,223	6,216	6,281	6,122	4,642	3,849	5,725	7,488	72,033
1983–84[2]	5,488	4,749	4,965	4,764	4,990	5,296	5,599	6,723	5,663	7,958	7,859	6,812	70,866
1984–85[2]	6,937	5,581	4,178	4,519	5,171								

[1] In inedible products (Resins, Plastics, etc.). [2] Preliminary. *Source: Bureau of the Census.* T.52a

Castor Oil Stocks in the United States In Thousands of Pounds

Crop Year	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1
1982–83	6,874	5,922	7,820	6,722	6,278	6,742	4,966	9,155	6,493	4,837	8,975	4,766
1983–84[1]	5,501	5,688	6,086	4,860	5,096	2,101	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1984–85[1]	6,998	7,432	5,669	11,734	10,403	10,251						

[1] Preliminary. *Source: Bureau of the Census.* T.52b

Monthly Average Wholesale Prices of Castor Oil[1] at New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	37.90	37.90	37.80	37.80	37.80	38.40	41.30	50.90	53.10	54.10	56.00	56.00	44.92
1980	55.70	55.70	55.80	55.60	55.00	52.00	51.00	49.80	48.00	46.50	45.30	46.00	51.37
1981	46.70	45.90	45.00	45.00	44.60	44.10	43.50	44.30	43.70	43.30	43.30	43.30	44.39
1982	42.80	43.30	43.30	43.30	44.70	45.90	46.50	45.50	45.50	45.50	45.50	45.50	44.78
1983	45.50	45.50	45.50	46.80	49.50	49.50	53.40	61.80	78.50	78.50	78.50	78.50	59.29
1984	78.50	78.50	78.50	78.50	78.50	73.70	69.00	77.30					

[1] Average wholesale, TANK CARS, IMPORTED BRAZIL. *Source: Foreign Agricultural Service, U.S.D.A.* T.53

Cattle and Calves

The number of cattle and calves on U.S. farms in 1984 declined 3 percent from 1983 levels. On January 1, 1985, the U.S. cattle and calf inventory totaled 109.8 million head, down from the revised January 1, 1984, inventory of 113.7 million. The beef cow inventory was 6 percent below year-earlier levels, and beef replacement heifers were 10 percent lower than 1983 levels. USDA estimated the 1984 calf crop at 42.5 million head, 3 percent below 1983.

The 109.8 million head cattle and calf inventory reportedly is the lowest number since 1968, and the calf inventory figure is the lowest since 1963. These figures continue the trend of lower inventory figures begun in 1981. Industry sources said the low inventory indicates producers are not rebuilding herds, mostly because of financial problems associated with the depressed agricultural economy.

The decline in U.S. cattle numbers is expected to lead to reduced U.S. beef production in 1985. Although U.S. beef output increased slightly in 1984, U.S. and Canadian cattle numbers are expected to continue to decline in 1985. Poor financial returns to producers are cited as contributing to the continued declines.

U.S. federally inspected slaughter in 1984 totaled 35.9 million head, up about 3 percent from 34.8 million in 1983. In addition, federally inspected calf slaughter in 1984 totaled 3.0 million head, up from 2.9 million in 1983. Liquidation of cattle and calves was higher in 1984 because it was unprofitable for producers to feed cattle, even with a decline in feed costs. Increased competition from the poultry industry also has continued to stifle cattle producers' profitability.

The number of cattle on feed as of January 1, 1985, in the 13 major cattle states totaled 10.6 million head, 7 percent more than 9.9 million in feedlots on January 1, 1984. Placements of 7.6 million picked up slightly from the year before.

Futures Markets

Live beef cattle futures (40,000 pounds) are traded at the Chicago Mercantile Exchange, and a 20,000 pound futures contract is traded at the Mid-America Commodity Exchange in Chicago. A 44,000 pound feeder cattle futures contract also is traded at the Chicago Mercantile Exchange.

World Cattle and Buffalo Numbers In Millions of Head

Year	Argentina	Australia	Brazil	Canada	China	Colombia	France	W. Germany	India	Poland	Turkey	Mexico	South Africa	USSR	Un. Kingdom	United States	World Total[1]
1981	58.8	25.2	93.0	12.2	95.0	24.4	23.6	15.1	245.6	11.3	16.9	34.0	13.2	115.1	13.1	114.4	943
1982	57.9	24.6	93.0	12.1		24.2	23.5	15.0	246.6	11.5	17.0	34.7	13.4	115.9	13.0	115.4	946
1983	58.0	22.5	93.0	11.6		24.1	23.7	15.1	247.7	11.0	17.1	33.9	13.1	117.2	13.2	115.0	944
1984[3]	58.3	21.8	93.3	11.3		24.0	23.6	15.6	248.7	11.1	17.2	33.9	12.9	119.4	13.1	113.7	947
1985[1]	58.4	22.5	93.6	11.1		23.8	23.3	15.5	249.7	11.2	17.3	33.9	12.9	121.0	12.6	109.8	948

[1] Estimate. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.54

U.S. Cattle on Feed in 7 States In Thousands of Head

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Annual
1981	7,863	7,505	7,126	6,837	7,030	7,054	6,846	6,451	6,289	6,596	7,113	7,328	7,863
1982	7,201	7,055	6,869	7,024	7,066	7,363	7,181	6,836	6,817	7,153	8,143	8,324	7,201
1983	8,316	8,052	7,604	7,268	7,221	7,331	7,278	6,861	6,704	6,951	7,683	7,814	8,316
1984	8,006	7,917	7,515	7,568	7,376	7,318	7,125	6,811	6,747	7,442	8,221	8,544	8,006
1985	8,617												

Source: Economic Research Service, U.S.D.A. T.54a

U.S. Cattle Placed on Feedlots in 7 States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1981	1,277	1,190	1,383	1,721	1,619	1,323	1,082	1,419	1,845	2,072	1,637	1,301	17,814
1982	1,457	1,320	1,798	1,565	1,853	1,420	1,205	1,731	1,994	2,660	1,785	1,533	20,261
1983	1,509	1,179	1,394	1,566	1,843	1,595	1,174	1,582	2,003	2,358	1,711	1,736	19,727
1984	1,566	1,301	1,764	1,515	1,798	1,455	1,323	1,680	2,265	2,546	1,945	1,624	20,772
1985	1,452												

Source: Economic Research Service, U.S.D.A. T.54b

U.S. Cattle Marketings in 7 States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1981	1,525	1,440	1,553	1,386	1,400	1,449	1,412	1,526	1,452	1,470	1,315	1,340	17,198
1982	1,522	1,413	1,547	1,414	1,413	1,510	1,482	1,689	1,575	1,527	1,485	1,430	18,007
1983	1,643	1,506	1,593	1,470	1,583	1,570	1,497	1,651	1,682	1,626	1,459	1,425	18,680
1984	1,569	1,621	1,594	1,523	1,637	1,554	1,553	1,680	2,265	2,546	1,945	1,624	18,785
1985	1,452												

Source: Economic Research Service, U.S.D.A. T.54c

Cattle Supply and Distribution in the United States In Thousands of Head

Year	Cattle & Calves on Farms Jan. 1	Imports	Calves Born	Total Supply	Livestock Slaughter—Cattle and Calves Commercial Federally Inspected	 Other[2]	 All Commercial	 Farm	 Total Slaughter	Deaths on Farms	Exports	Total Disappearance
1980	111,242	681	44,938	156,861	33,936	2,458	36,395	401	36,795	5,413	66	42,274
1981	114,351	680	44,666	159,676	35,273	2,478	37,751	400	38,151	4,897	88	43,136
1982	115,444	1,005	44,200	160,649	36,636	2,211	38,864	400	39,264	5,440	58	44,762
1983[1]	115,001	921	43,925	159,847	37,180	2,559	39,739	408	40,136	5,501	56	45,693
1984[1]	113,700	753	42,499	156,952					41,290	5,500	71	46,861
1985[1]	109,801											

[1] Preliminary. [2] Wholesale and retail. *Source: Economic Research Service, U.S.D.A.* T.56

U.S. Cattle on Feed in 13 States, Quarterly In Thousands of Head

Year		I	II	III	IV	Year		I	II	III	IV
1980	Number on Feed[1]	10,399	9,042	8,631	8,975	1983	Number on Feed[1]	10,271	9,153	9,070	8,465
	Placed on Feed	4,849	5,254	5,832	6,613		Placed on Feed	5,027	5,894	5,583	7,272
	Marketings	5,691	5,128	5,223	5,264		Marketings	5,694	5,527	5,891	5,436
1981	Number on Feed[1]	9,845	8,666	8,646	8,210	1984[2]	Number on Feed[1]	9,908	9,340	8,700	9,000
	Placed on Feed	4,816	5,590	5,275	6,193		Placed on Feed	5,511	5,562	6,252	7,559
	Marketings	5,557	5,113	5,460	5,034		Marketings	5,714	5,620	5,684	5,507
1982	Number on Feed[1]	9,028	8,818	8,981	8,800	1985[2]	Number on Feed[1]	10,635			
	Placed on Feed	5,572	5,781	5,846	7,216		Placed on Feed				
	Marketings	5,443	5,209	5,773	5,374		Marketings	6,066			

[1] Beginning of Period. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.56a

United States Beef Supply and Utilization

Year		Commercial production	Farm production	Beginning stocks	Imports	Total supply	Exports	Shipments	Military purchases	Ending stocks	Total disappearance	Per capita disappearance	Retail weight per capita	Population
		Million Pounds										*Pounds*		*Million*
1981	I	5,561	61	328	447.80	6,397.80	61.40	10.09	49	342	5,935.30	26.16	19.36	226.90
	II	5,435	26	342	418.00	6,221.00	46.96	9.64	58	297	5,809.40	25.55	18.90	227.40
	III	5,541	26	297	508.77	6,372.70	47.09	10.38	53	235	6,027.23	26.44	19.56	228.00
	IV	5,677	62	235	368.49	6,342.49	60.47	5.70	35	257	5,984.33	26.18	19.37	228.60
	Year	22,214	175	328	1,742.99	24,459.99	215.92	35.80	195	257	23,756.27	104.32	77.20	227.70
1982	I	5,455	59	257	367.93	6,138.93	55.45	12.54	36	212	5,822.93	25.42	18.81	229.10
	II	5,363	25	212	538.37	6,138.37	65.56	14.74	39	190	5,829.07	25.39	18.79	229.60
	III	5,730	26	190	655.72	6,601.72	55.83	15.09	35	248	6,247.80	27.14	20.08	230.20
	IV	5,818	60	248	377.16	6,503.16	72.90	12.93	25	294	6,098.32	26.42	19.55	230.80
	Year	22,366	170	257	1,939.18	24,732.18	249.74	55.30	135	294	23,988.13	104.28	77.17	229.90
1983[1]	I	5,527	64	294	527.89	6,412.89	66.81	10.35	28	299	6,008.73	25.95	19.20	231.50
	II	5,556	27	299	516.67	6,398.67	61.96	10.27	34	254	6,038.44	26.02	19.22	232.00
	III	6,015	28	254	539.04	6,836.04	71.62	9.14	34	268	6,453.28	27.74	20.53	232.60
	IV	5,962	64	268	347.47	6,641.47	71.71	10.47	25	325	6,209.29	26.66	19.73	233.20
	Year	23,060	183	294	1,931.07	25,468.07	272.10	40.23	121	325	24,709.74	106.38	78.72	232.30
1984	I	5,708	61	325	470.5	6,564.5	90.0	10.8	24	326	6,113.6	26.16	19.36	233.70
	II	5,819	26	326	371.0	6,542.0	70.5	13.2	36	303	6,119.3	26.13	19.34	234.20
	III	5,949	26	303	513.7	6,791.7	86.6	14.2	27	320	6,343.9	27.03	20.00	234.70
	IV	5,933	61	320	467.9	6,781.9	81.6	9.1	25	358	6,308.2	26.74	19.78	236.00
	Year	23,409	174	325	1,823.1	25,731.1	328.8	47.3	112	358	25,885.1	106.06	78.48	234.60

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.56b

Condition[1] of Pasture and Range Feed in the United States, on First of Month In Percent of Normal

Year	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1981	70	79	80	84	82	82	80	80	78
1982	81	79	87	90	86	82	81	80	N.A.
1983	84	80	85	88	76	63	66	73	N.A.
1984	74	75	79	80	75	70	66	74	

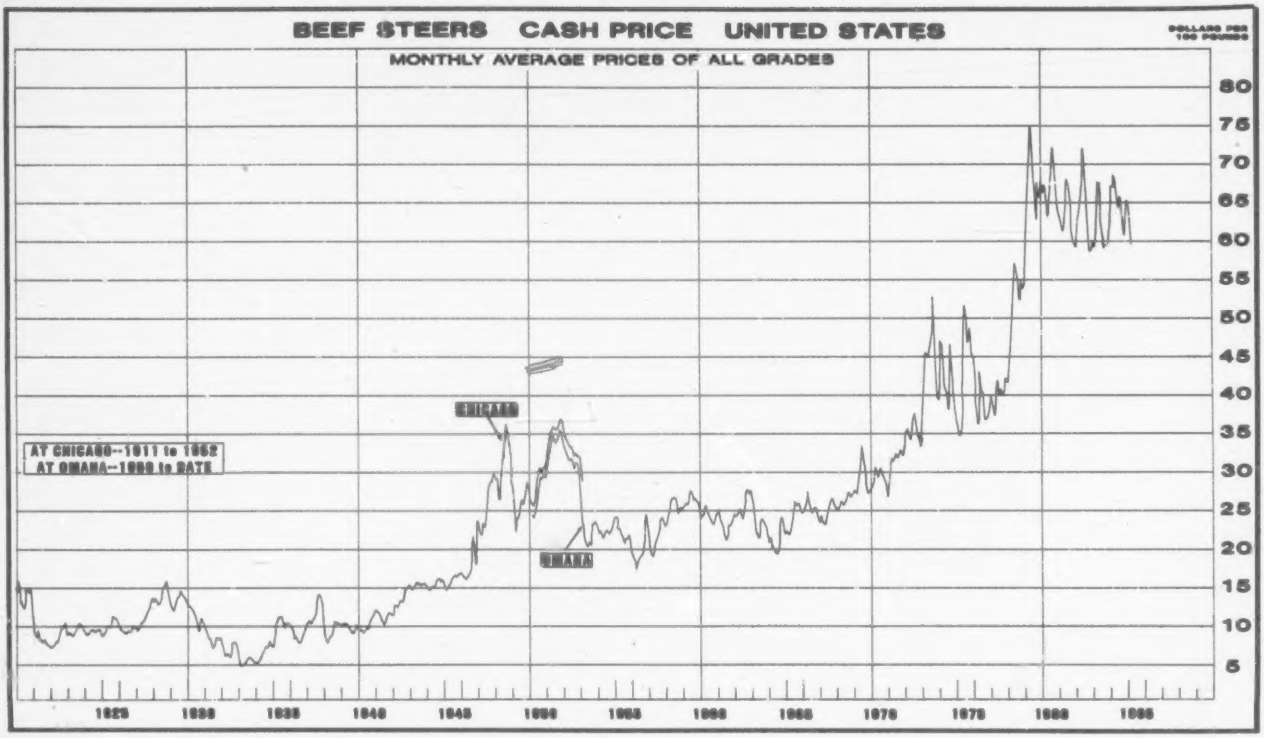
[1] Indicates current supply of feed for grazing on non-irrigated pastures & ranges relative to that expected from existing stands under very favorable weather conditions. [80 & over, good to excellent; 65–79, poor to fair; 50–64, very poor; 35–49, severe drought; under 35, extreme drought.] *Source: Statistical Reporting Service, U.S.D.A.* T.57A

Weekly Federally Inspected Cattle Slaughter in the United States In Thousands of Head

Week ended 1984	Cattle 1983	Cattle 1984	Cattle 1985	Steers 1983	Steers 1984	Steers 1985	Cows 1983	Cows 1984	Cows 1985
Jan. 1[1]	555	589	522	268	292	241	115	133	109
8	682	606	553	299	277	247	159	164	129
15	725	699	736	337	325	323	156	180	183
22	693	707	741	329	339	355	140	163	153
29	667	693	680	325	333	327	132	169	140
Feb. 5	637	657	666	312	318	313	119	159	146
12	668	689		330	344		126	150	
19	631	683		310	326		126	153	
26	624	666		326	317		114	146	
Mar. 5	621	684		306	329		112	139	
12	615	675		312	324		108	145	
19	628	689		322	342		114	143	
26	608	644		299	319		113	134	
Apr. 2	589	650		283	312		112	139	
9	588	631		287	301		119	135	
16	644	662		333	328		121	143	
23	636	651		316	322		127	148	
30	623	655		326	322		118	147	
May 7	649	666		332	332		127	149	
14	675	712		339	361		126	145	
21	669	730		333	368		127	152	
28	684	743		333	364		130	155	
June 4	591	642		293	317		109	132	
11	690	720		338	361		128	149	
18	675	722		324	363		126	150	
25	658	706		313	336		132	155	
July 2	662	708		325	333		129	157	
9	590	605		304	285		97	112	
16	682	742		330	337		135	168	
23	652	705		312	317		127	164	
30	661	680		323	152		126	152	
Aug. 6	688	696		329	327		131	158	
13	710	710		338	323		140	161	
20	706	701		338	322		143	153	
27	708	717		339	317		142	171	
Sept. 3	735	745		354	329		155	175	
10	644	653		304	296		125	144	
17	759	748		351	338		154	176	
24	721	745		313	343		159	174	
Oct. 1	746	710		332	316		167	169	
8	736	733		327	321		165	167	
15	734	729		332	305		165	175	
22	725	731		315	313		172	176	
29	728	701		320	312		180	179	
Nov. 5	704	700		302	309		182	187	
12	698	683		318	298		162	175	
19	709	694		309	308		180	176	
26	580	577		268	261		137	139	
Dec. 3	702	711		320	298		176	194	
10	732	701		318	284		199	191	
17	704	733		331	305		171	186	
24	625	702		303	305		144	175	

[1] Corresponding date: Dec. 31, 1983. *Source: Economic Research Service, U.S.D.A.*

T.57b



Average Wholesale Prices of Beef Steers at Omaha, Choice (900–1100 Lbs.) In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	66.32	67.44	66.88	63.07	64.58	66.29	70.47	72.31	69.68	67.18	65.05	64.29	66.96
1981	63.08	61.50	61.40	64.92	66.86	68.26	67.86	66.37	65.37	61.45	59.81	59.24	63.84
1982	60.75	63.54	65.80	69.11	72.10	70.18	66.18	65.14	61.25	58.78	58.91	59.82	64.30
1983	59.33	61.20	64.03	67.70	67.51	65.90	62.22	61.27	59.19	59.58	59.41	62.85	62.52
1984	67.08	67.07	68.60	67.86	65.89	64.28	65.79	64.36	62.68	60.85	64.24	65.32	65.34
1985	64.35												

Source: Economic Research Service, U.S.D.A. T.65

Average Prices of Steers (Stocker & Feeder) Kansas City In Dollars Per 100 Pounds

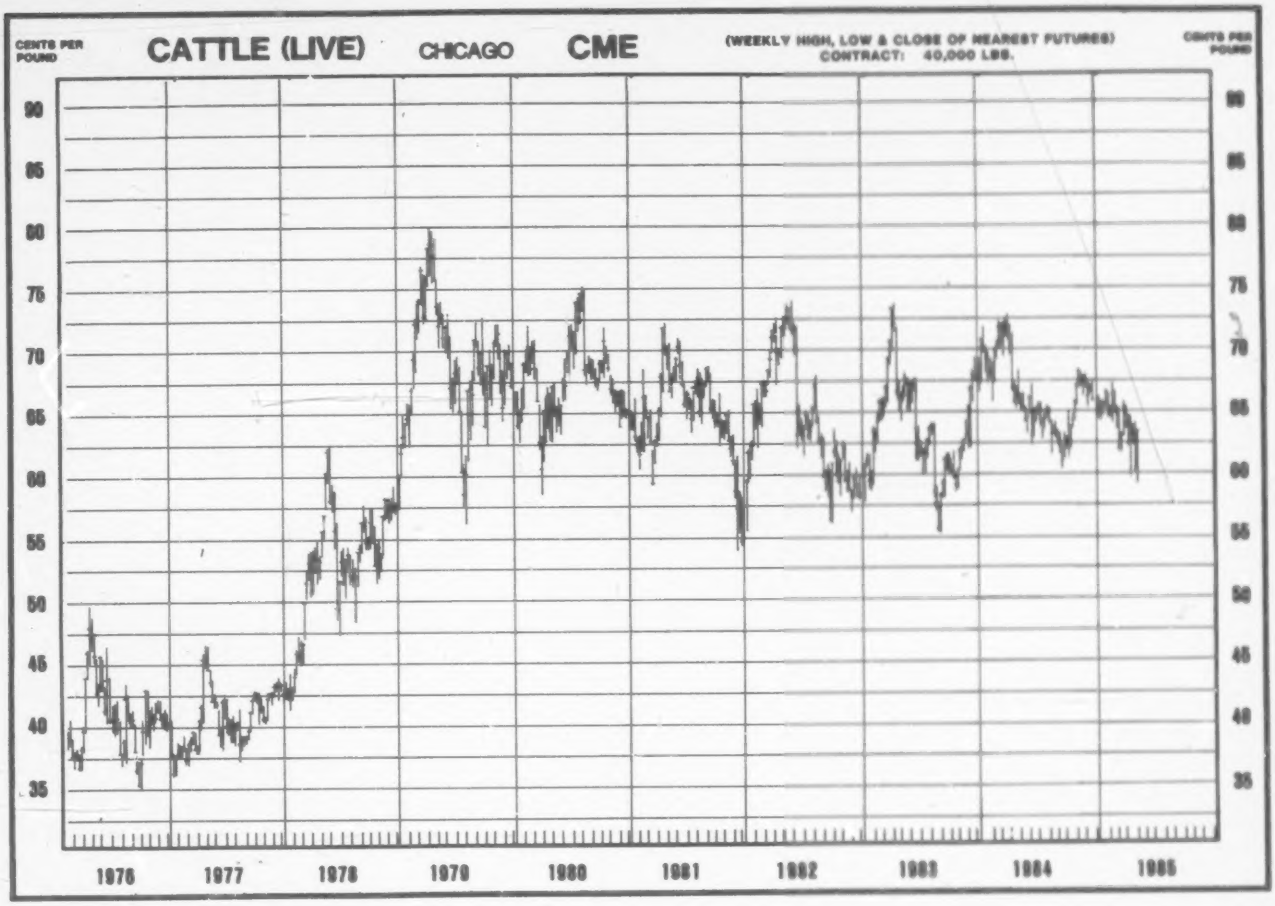
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	76.52	78.35	72.67	66.89	65.52	68.83	69.48	71.92	71.53	71.64	70.23	70.04	71.30
1981	68.56	68.41	65.47	66.28	63.10	63.51	61.51	64.15	64.58	62.52	61.77	58.96	64.26
1982	59.22	62.37	63.96	64.72	66.07	63.70	64.17	66.42	63.55	62.21	61.24	59.17	62.79
1983	63.70	66.34	66.71	65.90	63.88	60.41	58.21	59.58	55.81	56.97	58.12	61.00	61.39
1984	64.39	65.97	66.30	64.15	60.82	59.28	62.17	61.34	62.01	62.74	63.96	64.26	63.12
1985	66.00												

Source: Economic Research Service, U.S.D.A. T.61

Federally Inspected Slaughter of Cattle in the United States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1980	2,739	2,486	2,403	2,540	2,616	2,533	2,667	2,684	2,739	3,003	2,507	2,725	31,642
1981	2,803	2,483	2,726	2,625	2,593	2,770	2,765	2,772	2,846	2,939	2,668	2,829	32,819
1982	8,183			8,192			8,770			8,762			33,907
1983[1]	2,893	2,554	2,828	2,615	2,820	3,000	2,737	3,220	3,156	3,099	2,899	2,994	34,816
1984[1]	2,951	2,836	2,954	2,728	3,169	3,062	2,996	3,260	2,903	3,313	2,923	2,784	35,879
1985[1]	3,124												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.66

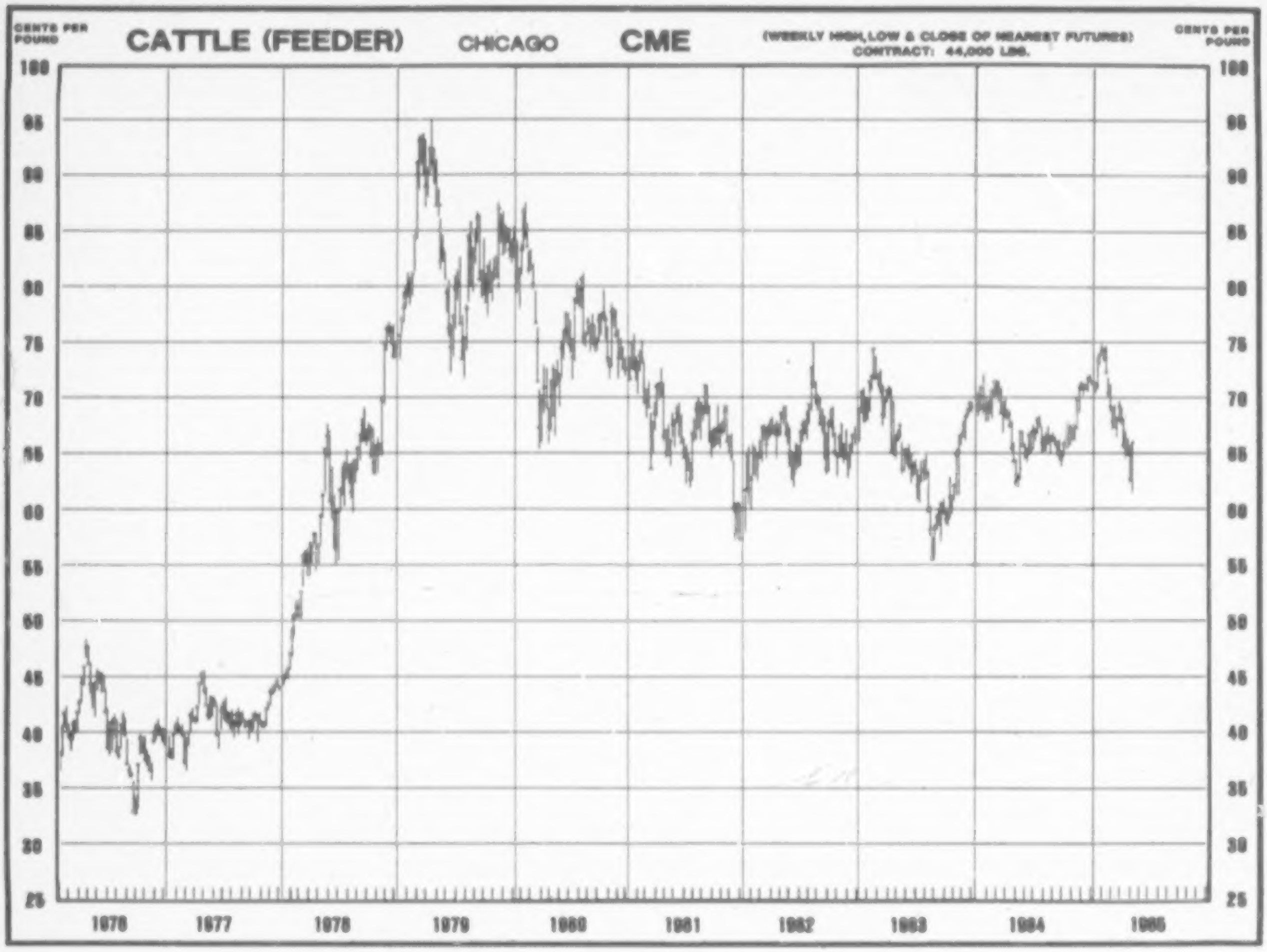


High, Low & Closing Prices of June Live Beef Cattle Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1979	High	53.65	60.27	58.75	59.57	57.85	60.60	61.90	62.25	64.50	67.90	70.50	74.22	79.75	79.12	72.97	79.75
	Low	49.90	53.65	51.10	54.40	53.45	57.05	57.25	58.25	61.20	63.00	64.65	69.52	70.75	70.10	68.05	48.60
	Close	53.60	58.35	55.70	57.60	57.07	59.62	60.25	61.30	63.55	67.67	70.20	71.35	78.35	71.97	68.15	—
1980	High	75.00	74.50	73.60	74.40	72.85	74.30	76.10	76.95	75.80	76.00	75.10	73.77	67.20	67.50	69.50	76.95
	Low	69.20	70.55	68.10	65.45	64.05	70.40	69.12	72.05	72.02	67.70	71.35	63.22	60.25	62.80	63.35	60.25
	Close	73.75	70.90	71.40	66.30	72.62	73.75	72.57	74.92	75.05	71.80	71.95	63.60	64.82	65.30	69.02	—
1981	High	—	—	—	75.25	74.92	76.00	76.60	76.50	76.35	72.65	71.42	68.55	72.40	70.72	70.97	76.60
	Low	—	—	—	70.80	71.80	72.85	72.90	73.67	69.40	68.05	66.65	63.17	70.10	66.22	67.62	63.17
	Close	—	—	—	73.95	74.87	73.55	74.37	76.07	71.32	68.72	67.77	68.55	70.17	68.17	69.35	—
1982	High	72.30	71.90	70.40	67.95	66.97	67.35	66.72	66.05	63.55	61.60	64.75	66.87	70.10	73.65	74.00	74.00
	Low	70.40	68.05	66.85	64.82	64.02	64.42	64.60	61.80	54.75	56.00	60.65	62.72	66.20	69.30	69.57	54.75
	Close	70.40	69.80	67.00	67.02	65.37	65.27	65.20	63.30	55.77	61.40	62.92	66.42	69.57	73.37	70.00	—
1983	High	—	65.50	63.30	64.55	63.72	63.25	62.50	61.80	62.00	63.90	66.47	69.77	71.15	68.05	67.70	71.15
	Low	—	63.90	60.00	60.50	61.77	58.40	58.02	58.52	58.55	60.75	62.90	64.80	65.10	64.30	65.75	58.02
	Close	—	64.10	62.75	62.85	62.30	59.27	59.62	60.80	61.10	62.72	65.27	69.62	66.12	66.05	66.85	—
1984	High	—	—	62.25	64.65	66.55	65.70	65.55	66.30	67.65	68.35	69.35	69.85	69.70	67.35	67.25	69.85
	Low	—	—	61.35	61.10	62.95	63.00	63.20	63.60	65.05	65.45	65.10	67.00	65.62	64.60	63.32	61.10
	Close	—	—	61.80	64.15	63.25	64.90	63.75	65.45	67.05	66.05	69.10	68.70	66.17	64.62	66.05	—
1985	High	—	—	66.55	67.35	67.40	67.70	67.10	68.15	68.10	69.00	69.50	67.75				
	Low	—	—	66.00	65.00	65.00	65.70	65.20	66.30	66.50	66.35	66.55	64.60				
	Close	—	—	66.55	65.00	67.37	66.40	66.75	67.70	67.85	68.35	67.37	67.20				

Source: Chicago Mercantile Exchange

T.62



Month End Open Interest of Live Beef Cattle Futures at Chicago In Contracts

Year	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	97,005	96,410	84,814	75,913	65,881	60,296	57,506	59,621	75,371	55,978	64,729	62,872
1980	57,192	60,701	50,406	55,582	53,319	59,162	67,059	57,314	58,815	58,009	64,570	45,864
1981	45,325	45,425	48,336	54,045	48,667	50,162	44,597	53,142	51,267	54,025	61,763	51,226
1982	51,036	51,082	61,160	58,383	61,341	48,314	44,024	44,645	42,694	42,412	44,085	45,115
1983	49,014	56,500	59,992	59,771	58,548	47,307	42,292	49,524	52,174	48,215	49,014	51,629
1984	54,669	57,351	59,793	50,190	44,142	41,790	38,689	37,064	38,416	45,984	64,085	57,242
1985	58,769	57,744	63,236									

Source: Chicago Mercantile Exchange T.64

Volume of Trading of Live Beef Cattle Futures at Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	534.2	526.1	660.3	697.4	720.1	586.5	554.2	683.4	553.5	674.3	554.4	470.5	7,214.8
1980	646.0	545.5	562.0	568.6	499.5	460.7	604.3	443.8	461.1	461.0	348.3	395.2	5,997.0
1981	354.8	347.8	430.7	416.4	350.0	361.0	320.8	329.3	348.9	327.7	335.3	359.7	4,282.4
1982	387.2	332.5	434.3	355.8	389.3	458.4	340.2	326.0	353.1	421.2	337.4	305.6	4,441.0
1983	370.4	332.7	455.8	489.0	389.1	328.9	302.2	324.9	344.1	335.4	297.9	277.9	4,248.2
1984	457.4	397.6	404.2	323.2	256.4	215.5	265.3	202.6	181.0	245.9	345.7	258.5	3,553.3
1985	340.7	290.3	327.9										

Source: Chicago Mercantile Exchange T.63

CATTLE AND CALVES

Beef Steer-Corn Price Ratio at Omaha[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1981	19.2	19.3	19.4	20.0	20.6	21.4	21.5	23.8	26.0	25.2	25.0	25.0	22.2
1982	24.6	25.9	26.5	26.5	27.2	26.5	26.1	29.2	27.5	27.7	25.1	25.2	26.5
1983	24.5	23.4	22.7	21.9	21.8	21.2	19.6	18.1	17.8	18.4	18.3	19.8	20.6
1984	21.6	22.1	21.1	20.4	19.7	19.1	20.4	20.7	21.3	22.5	24.6	25.6	21.6
1985	24.8												

[1] Bushels of No. 2 Yellow Corn Equal in Value to 100 Pounds Liveweight of Choice Slaughter Steers, 900–1100 lbs. *Source: Economic Research Service, U.S.D.A.*

T.56c

Farm Value, Income & Wholesale Prices of Cattle & Calves

Year	United States — Farm Value of All Cattle—Jan. 1 — Per Head $	United States — Farm Value of All Cattle—Jan. 1 — Total Million $	United States — Gross Income From C. & C.[2] Million $	At Omaha — Steers[3] — Prime	At Omaha — Steers[3] — Choice	At Omaha — Steers[3] — Good	At Omaha — Heifers — Good	At Omaha — Heifers — Choice	Feeder Steers All Weights at K.C.	Cows, Utility Omaha	Vealers, Choice So. St. Paul	Cows, Commercial Omaha	Beef, Dressed[4] — Steer, Choice	Beef, Dressed[4] — Heifer, Choice	Beef, Dressed[4] — Cow[5] Canners[6]
				Dollars Per 100 Pounds											
1978	232	27,030	28,813	N.A.	52.34	47.98	46.11	50.30	56.16	36.78	69.24	37.80	80.80	78.58	74.61
1979	403	44,698	35,128	N.A.	67.67	63.05	61.47	65.91	77.60	50.10	91.41	50.06	101.72	100.00	100.48
1980	502	55,831	32,083	N.A.	67.05	62.16	61.22	64.90	71.30	45.72	75.52	44.91	104.39	101.86	92.45
1981	475	54,292	30,183	N.A.	63.84	59.83	59.46	62.05	64.26	41.93	77.25	41.59	99.85	97.48	84.06
1982	415	47,967	30,474	N.A.	64.22	59.47	59.82	62.79	62.79	39.96	77.70	40.35	101.68	98.54	78.96
1983[1]	406	46,769		N.A.	62.52	56.99	56.75	61.45	61.39	39.35	72.97	39.41			
1984[1]	396	44,976			65.34	59.14	58.73	64.59	63.12	39.81	58.57	40.75			
1985[1]	402	44,147													

[1] Preliminary. [2] Excludes interfarm sales & Gov't. payments. Cash receipts from farm marketings plus value of farm home consumption. [3] Weighted average prices of beef steers, sold out of first hands for slaughter. [4] Carlots. [5] All weights. [6] And cutter. *Source: Statistical Reporting Service, U.S.D.A.*

T.60

Average Price Received by Farmers for Beef Cattle In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1979	60.20	64.70	70.60	73.40	71.90	66.80	65.50	62.20	66.80	64.60	63.90	64.40	66.10
1980	63.80	67.00	64.40	60.60	60.70	61.10	63.20	64.40	63.00	62.10	60.00	59.40	62.40
1981	60.40	59.40	58.20	61.00	60.50	61.40	60.50	59.70	58.80	55.70	54.50	52.00	58.60
1982	53.50	56.30	58.60	60.10	62.60	61.10	58.80	58.10	55.60	53.80	52.60	52.50	56.70
1983	54.30	57.10	59.70	61.00	59.80	58.30	55.80	54.20	52.30	51.70	51.20	54.50	55.50
1984[2]	57.20	59.70	61.70	60.10	58.60	57.60	57.60	56.60	55.70	54.10	54.80	57.00	57.30
1985[2]	57.30	58.50	57.20										

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.68

Average Price Received by Farmers for Calves In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1979	79.10	87.00	94.80	98.20	99.50	92.30	91.20	87.20	90.00	86.90	86.30	84.30	88.70
1980	86.90	90.90	82.60	75.50	75.40	76.90	75.40	75.60	74.30	73.90	72.10	70.30	76.80
1981	70.40	70.60	68.80	69.60	66.00	66.30	62.00	62.30	61.40	59.00	59.40	57.70	64.00
1982	57.00	58.90	61.90	62.10	64.20	61.70	60.40	61.80	59.00	58.30	58.10	58.80	59.80
1983	62.40	66.50	68.40	66.70	66.20	64.30	60.30	57.40	56.10	57.20	59.40	60.60	61.70
1984[2]	61.10	63.90	63.70	62.30	60.80	59.20	59.10	59.10	56.60	58.20	59.40	59.40	59.90
1985[2]	64.10	65.40	66.00										

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.69

Federally Inspected Slaughter of Calves & Vealers in the U.S. In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	265	212	245	201	188	162	190	216	193	225	210	192	2,499
1980	212	187	201	185	161	154	186	182	198	229	185	214	2,294
1981	215	192	213	190	159	175	204	198	228	236	217	254	2,478
1982	702			609			692			726			2,729
1983[1]	221	204	246	202	194	211	214	262	258	259	266	262	2,798
1984[1]	253	236	264	226	233	218	255	292	245	282	275	247	3,026
1985[1]	270												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.67

Cement

Total U.S. demand for cement increased about 17 percent in 1984 in response to improved industrial, commercial, and residential construction activity.

The shortfall in domestic production of cement compared to demand continued to widen in 1984, and the industry relied more heavily on imports to meet its needs. Import reliance reached about 9 percent of apparent consumption in 1984, the highest level since 1979. Imports of cement and clinker, based on incomplete data, were about double the amount imported in 1983. Major import sources were Canada, Spain, and Mexico.

The trend toward consolidation of the industry continued in 1984, with about 35 percent of U.S. cement capacity foreign-owned by the end of the year.

Domestic uses for cement in 1984 approximated the following: ready-mixed concrete—69 percent; concrete products such as block, pipe, and prestressed precast concrete—6 percent; building material dealers—6 percent; highway contractors—4 percent; other contractors, government agencies and miscellaneous—9 percent.

The Bureau of Mines expects domestic demand for cement to increase at an average annual rate of 2 percent through 1990, from a 1983 base. Domestic production is expected to total 83 million tons in 1985 and U.S. apparent consumption 87 million tons.

Average monthly prices for bulk cement in 20 cities as reported in *Engineering News Record* declined to $61.37 per short ton in May from a January average of $62.47, but later rose to $63.75 in late summer. The December 1985 price of $63.74 compared with $61.98 in December 1983.

World Production of Hydraulic Cement by Selected Countries In Millions of Short Tons

Year	Belgium	Brazil	Canada	China	France	W. Germany	India	Italy	Japan	Poland	Spain	South Africa	Un. Kingdom	United States	USSR	World Total
1980	8.2	30.0	11.6	88.0	32.1	39.6	19.5	46.0	97.0	20.3	30.9	7.9	16.3	76.7	137.8	973.8
1981	7.4	28.7	11.2	92.6	31.1	36.2	22.9	45.8	93.5	15.7	31.5	8.9	14.1	72.9	140.2	979.3
1982[1]	7.0	28.3	9.3	103.7	28.8	34.4	24.8	43.8	92.6	17.7	32.0	8.8	14.3	64.3	136.3	969.3
1983[2]	6.0	42.1	8.6	119.3	27.0	34.2	27.6	43.2	88.9	17.8	33.8	8.7	14.8	71.4	141.1	1,020.4
1984[2]				120.0	28.0	36.0		45.0	90.0		34.0		15.0	79.0	142.0	1,046.0

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.70

Salient Statistics of Cement in the United States

Year	Net Import Reliance as a % of Apparent Consumption	Production — Million Tons			Capacity Used[3] %	Shipments From Mills		Average Value (F.O.B. Mill) $ per Ton	Stocks at Mills Dec. 31	Imports[5]	Exports[5]	Apparent Consumption	Raw Materials Used in Producing Portland Cement — Mil. Short Tons			
		Portland	Others[2]	Total		Total Mil. Tons	Value[4] $ Mil.		Million Tons				Cement Rock	Limestone[6]	Clay & Shale	Total (All)
1980	6	72.2	3.0	75.2	68.9	76.2	3,886	50.98	6.8	5.2	.2	77.6	25.0	78.3	10.4	126.0
1981	4	68.9	2.8	71.7	66.9	71.7	3,723	51.89	7.4	4.0	.3	73.3	26.6	73.0	9.4	120.6
1982	5	61.1	2.3	63.4	58.7	64.1	3,264	50.94	6.8	2.9	.2	65.6	18.6	71.3	8.3	107.1
1983[1]	6	67.5	2.9	70.4	64.6	70.9	3,534	49.95	6.7	4.2	.1	74.6	21.6	73.1	8.7	113.5
1984[7]	9			78.0		80.5	4,133	51.02	6.5	8.9	.1	86.0				

[1] Preliminary. [2] Masonry, natural & pozzolan (slag-line). [3] At Portland-cement mills. [4] Value received f.o.b. mill, excluding cost of containers. [5] Hydraulic & clinker cement. [6] Including oyster shells. [7] Estimate. *Source: Bureau of Mines* T.71

Index of Wholesale Price of Portland Cement Base Per Ton 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	305.8	305.9	306.3	312.6	313.9	313.9	313.3	313.1	312.2	311.7	310.4	310.4	310.8
1981	324.3	324.2	324.3	332.4	332.3	330.9	331.5	331.5	331.9	330.2	330.2	330.2	329.5
1982	336.3	338.2	341.4	341.1	341.8	341.8	339.5	337.9	337.1	334.5	334.8	328.9	337.9
1983	326.4	332.4	330.2	339.1	339.6	340.9	340.5	346.3	347.9	346.8	340.5	340.5	339.1
1984	337.3	345.0	354.6	351.5	357.0	352.8	353.5	357.1	355.4	354.2	359.0		

Source: Bureau of Labor Statistics (1322-0131.99) T.74

Shipments of Finished Portland Cement from Mills in the United States In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1980	22.0	22.1	26.0	33.0	36.3	39.3	39.8	39.6	40.5	43.3	31.8	28.2	404.6
1981	20.7	20.8	30.2	35.2	34.2	38.1	38.9	37.5	37.3	36.3	29.6	23.5	382.7
1982	15.1	17.8	25.7	28.2	31.0	35.4	34.5	36.0	35.4	34.1	27.4	22.7	343.6
1983	18.9	17.7	25.4	28.4	33.6	39.4	37.3	41.9	39.5	39.1	32.8	22.2	376.9
1984	20.4	25.6	29.2	34.3	41.5	43.1	42.1	46.9	39.9				

[1] Does not necessarily agree with monthly figures. These are compiled from producers' annual reports and are final. *Source: Bureau of Mines* T.73

Cheese

Preliminary figures indicated that world production of cheese in 1984 totaled approximately 9.13 million tonnes, only slightly above world production for the previous year. The EC countries accounted for roughly a third of world production during 1984. The second-largest producer of cheese, the U.S., accounted for about 23 percent of world production—nearly equal to its proportion of world output in the previous year. Because of the relatively high level of expected cheese production in the EC, world cheese production in 1984 showed some tendency to increase despite a decline in world milk supplies. World cheese output in 1985 was forecast as growing slightly over 1984 levels due to some building of milk supplies worldwide. However, 1985 EC cheese production was expected to increase notwithstanding smaller milk supplies because of expected increases in demand. World cheese exports in 1984 were estimated to have increased by about 7 percent with another 2 percent gain forecast for 1985. Although prices for cheese on international markets declined slightly during the last part of 1984 because of the strength of the dollar, the lower prices were expected to generally stimulate the world demand for cheese in 1985. During the 1980–1983 period, world cheese exports tended to be highest from countries with relatively high support prices, particularly the EC, but also from other West European countries, the U.S. and Canada. This virtual disposal of surpluses on world markets tended to pressure cheese prices below levels they could have maintained in the absence of subsidization.

U.S. cheese production represents a rapidly growing sector of the U.S. dairy industry. Recently, cheese production has required more than a fourth of the U.S. market's supply of milk compared with less than one eighth in 1960. The growing popularity of cheese among consumers is accounted for by its range of flavors and textures, its ease of preparation, affordability, and storability. Health consciousness has led to noticeable inroads on commercial cheese demand made by imitation cheeses. Sales of cheese substitutes have also been increased by cost considerations. However, although cheese consumption is positively related to income, the effect is relatively small. It has been estimated that a 10 percent fall in retail cheese prices would probably increase sales by about 7–8 percent.

During the 1983/84 (October-September) marketing year, the CCC used about 687 million pounds of cheese, including 30 million pounds of Mozzarella, in domestic donation programs. Donations for foreign feeding programs under P.L. 480 totaled 5 million pounds, and foreign donations under Section 416 totaled 29 million pounds. On September 30, 1984, the CCC's uncommitted inventories amounted to 768 million pounds of cheese. CCC storage and marketing activity included processing black or barrel cheese and cutting cheddar cheese and rewrapping it into 1-pound loaves for resale in overseas military commissaries. Net purchases of cheese delivered to the CCC totaled 542 million pounds—gross purchases of 574 million pounds less 32 million pounds sold for unrestricted use.

World Cheese (Total[1]) Production In Millions of Metric Tons[3]

Year	Argentina	Australia	Brazil	Canada	China	Czechoslovakia	Denmark	France	W. Germany	Italy	Netherlands	New Zealand	USSR	Sweden	Switzerland	United Kingdom	United States
1979	239	132		167	215	99	189	1,117	387	601	432	90	701	96	125	234	1,686
1980	245	154		177	270	109	221	1,146	421	615	443	106	648	101	125	237	1,807
1981	226	130	217	177		113	243	1,168	448	610	465	84	656	103	128	241	1,940
1982	229	153	220	170		120	245	1,200	462	645	481	112	699	108	129	244	2,060
1983[2]	209	160	200	205		123	249	1,245	461	656	485	107	744	115	135	244	2,186
1984[3]	205	161	200	210		126	293	1,296	491	650	514	104	750	116	136	247	2,125

[1] Farm & factory production. [2] Preliminary. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.75

Supply and Distribution of All Cheese in the United States In Millions of Pounds

	Supply						Distribution							
	Production											Domestic Disapp.		
Year	Whole Milk[2]	All Cheese[3]	Jan. 1 Commercial Stocks	Imports[4]	Total Supply	Cheese 40-Lb. Blocks Wisc. Assembly Points ¢ per lb.	Exports & Shipments[5]	Jan. 1 Stocks	Dec. 31 Stocks	Amer. Cheese Removed by U.S.D.A. Programs	Total Disap.	Military	Civilian	Civilian Per Capita
1979	2,190	3,717	457	248	4,422		47	30	3	40	3,908	24	3,837	17.2
1980	2,376	3,984	513	231	4,728		46	3	169	350	4,037	16	3,976	17.6
1981	2,642	4,278	691	248	5,169	139.44	45	169	515	563	4,239	12	4,182	18.4
1982[1]	2,750	4,542	976	269	5,677	138.27	85	515	647	643	4,722	15	4,633	20.1
1983[1]		4,818	1,064	286	6,124	138.28	94	647		833	4,904	18	4,792	20.6
1984[1]		4,688	1,268	306		137.96				447				21.7

[1] Preliminary. [2] Whole milk American cheddar. [3] All types of cheese except cottage, pot and baker's cheese. [4] Imports for consumption. [5] Commercial. *Source: Department of Agriculture* T.76

Cheese Production in the United States In Millions of Pounds

Year	American			Swiss, Including Block	Brick & Munster	Limburger	Neufchetel	Cream Cheese	Italian Varieties	Blue mold	All Other Varieties	Total of All Cheese[2]	Cottage Cheese		
	Whole Milk	Part Skim	Total										Low-Fat	Curd[4]	Creamed[5]
1975	1,655	5.4	1,660	173.8	71.7	1.9	5.0	155.3	671.9	28.5	43.5	2,811	129.3	701.0	862
1976	2,049	5.0	2,054	196.3	74.5	1.9	3.6	164.4	747.4	33.9	44.4	3,320	135.4	711.1	875
1977	2,043	4.1	2,047	189.3	71.3	1.7	3.3	173.1	793.5	34.8	44.4	3,359	139.0	684.5	878
1978	2,074	4.9	2,079	209.4	76.2	1.6	3.9	194.3	875.7	35.3	44.2	3,520	153.1	688.4	871
1979	2,190	4.4	2,194	213.3	78.0	1.6	5.2	207.1	929.1	34.6	54.1	3,717	150.4	668.5	840
1980	2,376	5.4	2,381	218.9	85.4	1.6	4.3	224.3	982.7	33.0	52.9	3,984	179.8	667.4	825
1981	2,642	5.9	2,664	214.4	81.2	1.2	—241.3—		994.4	30.2	66.6	4,278	208.3	647.5	773
1982[1]	2,750	6.9	2,752	221.1	85.9	1.5	—262.8—		1,087.8	31.0	92.4	4,542	217.6	628.9	749
1983[3]			2,928	—1,890—								4,818	—	958.0	—
1984[3]			1,991	—2,697—								4,688	—	959.8	—

[1] Preliminary. [2] Excludes full-skim cheddar and cottage cheese. [3] Estimated. [4] Includes cottage, pot, and baker's cheese with a butterfat content of less than 4%. [5] Includes cheese with a butterfat content of 4 to 19%. *Source: Agricultural Marketing Service, U.S.D.A.* T.77

Wholesale Price of American Cheese, Fresh Single Daisies at Chicago In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	93.6	94.6	95.2	96.8	98.7	100.6	103.0	106.4	111.9	116.4	116.9	119.2	104.4
1976	118.2	108.2	113.8	116.6	114.6	115.3	120.0	125.8	118.3	114.2	114.0	114.0	116.1
1977	114.0	114.0	115.2	119.3	119.3	119.4	119.4	119.4	120.5	120.6	121.1	122.4	118.7
1978	122.9	124.1	124.6	125.9	125.9	125.9	126.0	132.1	134.0	139.4	140.0	141.0	130.1
1979	141.0	135.0	135.6	137.4	137.6	138.9	140.9	145.8	148.8	146.6	144.7	144.4	141.4
1980	146.7	147.2	150.8	153.5	154.2	154.8	155.5	157.0	161.5	165.3	164.1	164.1	156.2
1981	164.0	164.0	166.9	167.0	167.8	167.9	167.8	167.8	167.8	168.5	169.2	168.4	167.2
1982	168.4	168.4	168.4	168.4	168.4	168.4	168.4	168.3	168.3	168.6	168.6	168.6	168.5
1983	168.0	166.6	166.6	166.6	167.5	168.4	168.4	168.4	169.1	169.9	169.9	168.4	168.2
1984	168.9	168.9	168.9	168.9	168.9	168.8	170.0	172.1	175.9	174.4	169.9	169.1	170.4
1985	168.3												

Source: Statistical Reporting Service, U.S.D.A. T.79

United States Total Cheese Production[1] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	214.3	204.2	240.7	244.4	271.0	275.0	249.2	226.9	214.8	220.2	208.7	242.0	2,811
1976	245.6	236.7	278.0	293.5	314.3	322.3	294.9	283.5	261.2	254.5	255.3	280.4	3,320
1977	265.6	252.5	299.7	304.7	326.1	316.0	280.2	275.7	251.7	256.9	247.8	281.6	3,359
1978	271.1	259.9	314.4	303.7	332.9	331.9	293.6	286.5	265.0	279.3	279.7	301.4	3,519
1979	292.5	272.2	323.0	318.8	340.4	343.8	318.8	309.0	290.7	308.0	289.4	308.7	3,715
1980	312.3	303.1	339.7	336.6	360.5	359.9	332.7	317.6	317.0	332.1	317.2	354.4	3,984
1981	342.8	317.8	374.1	379.5	394.2	390.9	353.0	340.6	334.4	343.4	334.1	372.7	4,228
1982	351.3	331.1	391.7	———	1,203	———	———	1,121	———	———	1,142	———	4,542
1983[2]	374.9	352.6	425.3	413.1	439.4	444.7	402.1	381.3	373.0	391.9	388.2	415.4	4,818
1984[2]	387.4	369.1	412.9	415.3	436.8	419.7	387.7	368.5	349.4	377.6	371.8	392.2	4,688

[1] Excludes cottage and full skim American. [2] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.* T.78

Cold Storage Holdings of All Varieties of Cheese in the U.S., on First of Month In Millions of Pounds[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct	Nov.	Dec.
1975	494.0	485.9	458.5	447.5	441.0	454.8	475.1	477.6	449.7	422.2	388.3	378.5
1976	367.8	362.3	362.3	367.9	393.7	436.1	483.7	509.0	518.0	522.6	501.4	482.0
1977	478.4	485.7	471.2	485.8	510.3	557.2	583.7	592.9	592.9	553.9	502.8	479.8
1978	468.6	459.6	442.0	430.0	447.1	462.5	500.2	498.5	489.7	476.6	455.2	431.0
1979	436.4	436.6	446.2	448.6	462.2	495.3	519.9	555.3	548.5	540.6	526.9	528.2
1980	512.1	515.8	508.9	495.1	510.5	544.4	582.7	620.0	613.8	610.6	590.9	565.4
1981	578.8	601.7	596.3	593.6	632.4	649.8	685.7	714.2	719.4	694.3	682.4	677.5
1982	709.6	711.7	696.4	722.4	—	—	803.9	—	—	864.3	—	—
1983[1]	963.5	1,016	1,088	1,118	1,132	1,138	1,162	1,194	1,231	1,248	1,235	1,215
1384[1]	1,205	1,202	1,220	1,217	1,182	1,208	1,193	1,186	1,148	1,115	1,078	1,044
1985[1]	986.2	968.9	942.4									

[1] Preliminary. [2] Quantities are given in "net weight." *Source: Crop Reporting Board, U.S.D.A.* T.80

Chromite

Chromite is the only source of commercial chromium, a highly versatile industrial and strategic metal. World mine production of chromite in 1984 was about 3 percent above that of 1983, according to a preliminary estimate of the U.S. Bureau of Mines. The U.S. produces no chromite. Net import reliance in 1984 was estimated to be about 82 percent of apparent U.S. consumption. Estimated chromium contained in purchased stainless steel scrap accounted for about 18 percent of U.S. chromium demand in 1984.

U.S. 1984 imports of chromite for consumption were 60 percent above the reduced level in 1983, and consumption of chromite increased 57 percent following the previous year's sharp reduction reflecting increased demand in the steel industry. Consumption in the chemical industry more than doubled in 1984. The major source of chromite imports in 1984 was the Republic of South Africa. In the 1980–83 period, the Republic of South Africa accounted for 55 percent of the chromium contained in chromite and ferrochromium; Zimbabwe—8 percent; USSR—7 percent; Philippines—6 percent; others—24 percent.

Stainless steel producers consume the bulk of high-carbon ferrochrome, most of which is supplied by South Africa. U.S. imports of high-carbon ferrochromium (chromium content) increased 47 percent in 1984, and the much less important imports of low-carbon ferrochromium also increased 47 percent. Catalytic converters for automobiles and tubular manifolds are the two largest individual applications for stainless steel in the U.S., making use of Type 409 chromium steel in these applications. High-carbon ferrochrome is a key material in heat-resistant stainless steel used in jet engines.

Of the chromite consumed in the U.S. in 1984, the chemical and metallurgical industry is estimated to have accounted for 79 percent and the refractory industry—21 percent. Consumption of chromium ferroalloys, metal, and other chromium containing materials by end use was as follows: stainless and heat-resisting steel—81 percent; full-alloy steel—9 percent; superalloys—3 percent, and other alloys—7 percent. The Bureau of Mines estimated 1985 U.S. apparent consumption of chromium at about 450,000 tons. From a 1983 base, demand for primary chromium is expected to increase at an average annual rate of about 6.5 percent through 1990.

U.S. industry stocks of chromite at the end of 1984 dropped 29 percent, to 321,359 tons. However, refractory stocks were 8 percent lower than a year earlier and chemical-grade stocks were up 8 percent. Metallurgical-grade stocks were withheld to avoid disclosing company proprietary data. As of November 30, 1984, U.S. stockpile metallurgical-grade stocks of chromite (which comprised most of total inventory of the National Defense Stockpile) were 1.96 million tons versus a stockpile goal of 3.20 million tons.

According to the Bureau of Mines, the published price of Turkish high-chromium chromite in 1984 remained at $110 per metric ton, and the South African high-iron chromite prices remained at $48 to $52 per metric ton. The price of chromium metal, $3.75 to $4.40 per pound, was reported to have remained unchanged in 1984.

World Mine Production of Chromite In Thousands of Short Tons

Year	Albania	Brazil	Cuba	Finland	Greece	India	Japan	Pakistan	Philippines	Zimbabwe	Turkey	South Africa	Iran	USSR	Madagascar	World Total[1]
1977	970	342	22	443	46	389	20	9	593	746	560	3,372	257	2,400	182	10,415
1978	1,090	1,056	32	449	41	293	10	12	595	527	420	3,466	218	3,640	152	12,064
1979	827	375	31	480	50	342	13	3	613	597	410	3,634	150	2,535	141	10,277
1980	838	345	32	399	47	353	15	3	547	611	431	3,763	90	2,701	198	10,438
1981	937	260	23	454	47	369	12	1	484	591	466	3,164	35	2,646	110	9,660
1982[2]	965	304	30	380	46	374	12	1	391	476	448	2,385	45	2,701	100	8,770
1983[1]	990	310	35	375	45	400	9	1	365	475	440	2,460	55	2,700	100	8,921
1984[1]	1,000	350		400		450			400	500	450	2,500		2,700		9,210

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines* T.81

U.S. Salient Statistics of Chromite In Thousands of Short Tons

Year	% Net Import Reliance of Apparent Consumption	Shipments from Gov't Stockpiles	Exports	Imports (For Consumption)	Reexports	Consumption by Primary Consumer Groups (Gross Weight): Total	Metallurgical	Refractory	Chemical	Stocks, Dec. 31: Metallurgical	Refractory	Chemical	Total Stocks	$ Per Metric Ton: South Africa[2]	Turkish[4]
1976	89	311	124	1,275	85	1,006	597	202	207	762	136	111	1,009	39	
1977	91	517	187	1,293	61	1,000	578	208	214	900	174	264	1,338	59	137
1978	91	—	23	1,013	29	1,010	534	237	239	755	185	361	1,301	56	105
1979	90	—	27	1,024	28	1,214	774	198	242	416	161	330	907	56	110
1980	91	—	6	982	44	977	577	160	240	219	134	322	675	55	110
1981	90	—	71	898	67	889	503	148	238	230	128	370	728	55	110
1982	85	—	8	507	57	545	270	80	195	120	112	313	545	52	110
1983[1]	76		11	190	5	325	64	72	189	140	76	234	450	52	110
1984[3]	82		55	305		510	N.A.	93	416	N.A.	69	252	321	52	110

[1] Preliminary. [2] Cr_2O_3, 44% (Transvaal). [3] Estimate. [4] 48% Cr_2O_3. *Source: Bureau of Mines* T.82

Coal

U.S. coal production in 1984 totaled 890.1 million short tons, establishing a new annual record and 13.8 percent above the depressed output in 1983. The increased production was spurred by an expanding economy and consumer stockpiling for a possible miners' strike in October. The Energy Information Administration (EIA) forecast a further increase of 0.9 percent in U.S. coal production in 1985 to 898.5 million tons.

Domestic coal consumption in 1984 rose to a record 791.3 million short tons, 7.4 percent above 1983 consumption with all markets experiencing greater requirements as the economy continued to expand. The EIA projected a 6.2 percent increase in electric utility coal consumption in 1985. Coking coal consumption was expected to be about the same as in 1984, assuming that steel imports would not increase during the year. Coal consumption in the residential and commercial sector was projected by the EIA to remain at 1984 levels.

U.S. coal exports rose 4.8 percent in 1984, partly reflecting a sharp rise in exports to Canada, where coal-fired power plants generated more electricity to compensate for a temporary shutdown of some nuclear facilities. Also exports to the U.K. were the highest since 1980 to meet shortages caused by striking British coal miners.

December 31, 1984 U.S. coal stocks held by consumers were about 17 percent larger than a year earlier. Coal producers and distributors held about the same stocks as a year earlier. The EIA projected a decrease of about 18 million tons in stocks held by consumers in 1985 and a drop of 8.5 million in stocks held by producers and distributors.

World Production of All Coal[3] In Millions of Metric Tons

Year	Australia	E. Germany	Canada	Czechoslovakia	France	W. Germany	Greece	India	Japan	China	Poland	South Africa	Un. Kingdom	United States	U.S.S.R.	Yugoslavia
1982	135	276	43	125	20	224	27	135	18	635	227	137	125	756	647	55
1983[2]	143	278	45	129	20	209	30	144	17	688	234	139	119	730	642	59
1984[1]	150	280	48	130	20	212	31	145	16	695	237		109	750	660	55

[1] Estimate. [2] Preliminary. [3] Includes anthracite, subanthracite, bituminous, subbituminous, lignite and brown coal. *Source: United Nations.*

T.83

Bituminous Coal Production[1] in the United States In Millions of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1981	65.6	70.4	77.7	35.8	37.8	61.1	73.5	78.2	81.3	84.8	76.0	76.0	818.4
1982	65.7	69.6	82.2	73.2	70.7	71.2	59.9	72.1	67.2	70.1	63.0	62.2	833.5
1983	62.5	60.4	68.6	61.6	62.9	61.4	54.9	72.9	69.9	71.3	68.3	63.4	778.0
1984[2]	67.9	73.7	81.6	71.7	79.8	75.3	73.9	89.7	78.0	68.6	65.3	60.6	886.1
1985[2]	67.8	67.1											

[1] Includes small amount of lignite. [2] Preliminary. *Source: Bureau of Mines*

T.88

Pennsylvania Anthracite Coal Production[1] In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1981	305	472	548	437	271	472	566	534	417	457	550	394	5,423
1982	353	381	459	274	329	319	313	370	340	378	338	410	4,588
1983	277	280	343	285	293	352	309	400	385	414	412	359	4,089
1984[2]	284	249	278	228	377	293	384	435	423	395	376	293	4,015
1985[2]	298	295											

[1] Represents production in Pennsylvania only. Production outside which is small, is included in Bituminous Production series. [2] Preliminary. *Source: Bureau of Mines*

T.92

U.S. Stocks of Bituminous Coal for All Industrial & Retail Dealers, at End of Month In Million Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1981	193.6	192.9	202.2	181.9	162.9	153.0	149.0	151.7	159.4	169.7	177.4	179.6
1982	168.4	167.7	173.6	180.8	187.2	192.7	184.2	184.4	184.0	189.0	190.6	189.1
1983	185.7	185.4	186.1	187.2	190.8	190.7	174.9	168.6	167.2	172.6	172.7	162.1
1984[1]	155.5	161.9	166.3	173.8	183.1	185.7	184.0	190.2	199.1			

[1] Preliminary. *Source: Bureau of Mines*

T.87

Average Wholesale Price of Bituminous[1] Coal (Screenings, Industrial Use) Index—1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1982	520.6	525.3	525.0	527.9	529.6	529.3	533.9	534.9	534.4	533.9	535.5	534.6	530.4
1983	531.5	529.2	534.6	534.3	532.0	530.8	531.3	533.2	534.6	534.9	539.1	540.7	533.9
1984[2]	538.1	541.5	543.1	538.9	544.4	541.1	545.1	547.0	546.1	540.5	543.4	545.1	542.9
1985[2]	547.5												

[1] Prices are for Screenings, industrial use, f.o.b. mine. [2] Preliminary. *Source: Bureau of Labor Statistics* (0512)

T.90

COAL

Salient Statistics of the Bituminous Coal Industry in the United States

Year	Production			Value		Number of Mines	Thous. of Men Employed	Aug. Tons Per Man Per Day		Net Tons Per Man	Imports	Exports to:			
	Underground Millions Net Tons	Surface Millions Net Tons	Total Production Millions Net Tons	Total Million $	Avg. Per Ton $			Underground	Surface		(Thousands of Short Tons)	Grand Total (Thousands of Short Tons)	Canada (Thousands of Short Tons)	Europe (Thousands of Short Tons)	Asia (Thousands of Short Tons)
1980	337	487	824	21,580	24.52	5,598	224.9	9.86	28.32	16.32	1,194	89,882	17,039	40,414	25,481
1981	316	503	818	21,505	26.29	5,569	226.3	10.62	31:11	18.08	1,043	110,243	17,856	56,130	31,010
1982	338.6	495.0	833.5	22,621	27.14	5,363	214.4	11.16	30.60	18.13	742	105,244	18,205	51,211	29,957
1983[1]	299.9	478.1	778.0	20,111	25.85	4,265	173.5	13.18	33.60	21.19	1,271	76,870	16,809	32,979	21,895
1984[2]			886.1								1,234	80,793	20,140	32,766	21,306

[1] Preliminary. [2] Estimate. *Source: Energy Information Administration* T.84

United States Production of Coal by Principal States In Millions of Short Tons

Year	Anthracite Pennsylvania	Bituminous													Total U.S.
		Alabama	Colorado	Illinois	Indiana	Kentucky	Montana	Ohio	Pennsylvania	Virginia	West Virginia	Tennessee	Wyoming	Total Bituminous	
1980	6.1	26.4	18.8	62.5	30.9	150.1	29.9	39.4	87.1	41.0	121.6	9.9	94.9	823.6	829.7
1981	5.4	24.5	19.9	51.9	29.3	157.6	33.6	37.4	78.1	42.0	112.8	10.5	103.0	818.4	823.8
1982	4.6	26.6	18.3	60.3	31.8	150.2	27.9	36.5	74.8	39.8	128.5	7.5	108.4	833.5	838.1
1983[2]	4.1	23.8	16.7	56.8	31.8	131.2	28.9	33.8	65.7	35.0	115.0	6.6	112.2	778.0	782.1
1984[1]	4.0	27.1	16.8	65.3	36.8	165.5	32.8	39.0	71.1	35.3	129.6	7.7	128.4	886.1	890.1

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines* T.85

U.S. Consumption & Stocks of Bituminous Coal & Lignite In Millions of Short Tons

Year	Stocks—Dec. 31						Consumption						
	Electric Power Utilities	Oven Coke Plants	Steel & Rolling Mills	Other Industrials	Producers & Distrib.	Total	Electric Power Utilities	Coke Plants Beehive	Coke Plants Ovens	Steel & Rolling Mills	Other Industrials	Retail Deliveries[2]	Total
1980	178.3	9.0	—11.8—		23.9	223.0	568.3	——66.5——		—59.3—		4.9	699.1
1981	163.4	6.4	— 9.8—		23.8	203.4	595.6	——60.9——		—66.6—		5.4	728.5
1982	175.1	4.6	— 9.4—		36.1	225.2	592.6	——40.9——		—63.5—		6.6	703.6
1983[1]	149.1	4.3	— 8.6—		33.4	195.4	624.2	——37.0——		—65.6—		7.1	733.9
1984[3]	173.0	10.5	—13.5—		29.1	226.1	663.2	——45.0——		—71.0—		9.5	788.7

[1] Preliminary. [2] To other consumers. (Residential & Commercial) [3] Estimate. *Source: Energy Information Administration* T.86

Statistical Trends in the Pennsylvania Anthracite Industry

Year	Production (Millions of Net Tons)			Value of Produtionn Million $	Avg. Value Per Net Ton	Stocks (Dec. 31)		Exports to:					Apparent Consumpticn	Avg. No. of Men Working Daily (1,000)	Number of Mines	Avg. Tons Per Man Per Day
	Total	Surface	Underground			Electric Utilities (1,000 Short Tons)	Prod. & Distrib. (1,000 Short Tons)	Total (1,000 Short Tons)	Canada (1,000 Short Tons)	France (1,000 Short Tons)	Netherland (1,000 Short Tons)	South Korea (1,000 Short Tons)	(1,000 Short Tons)			
1980	6.1	5.5	.6	259.3	42.51	4,741	432	1,795	421	266	127		3,667	3.6	306	8.38
1981	5.4	4.8	.6	239.1	44.28	5,537	370	2,249	361	77	22		4,084	3.1	232	6.94
1982[1]	4.6	4.0	.6	229.3	49.85	6,080	672	980	316	57	—	550	3,349	2.7	220	4.52
1983[1]	4.1			214.4	52.29	6,507	498	776	296	58	30	357	2,823	2.1	224	7.55
1984	4.0					6,710	600	680	301	—	52	292	3,000			

[1] Preliminary. *Source: Energy Information Administration* T.91

Average Wholesale Price of Anthracite Coal (Chestnut—F.O.B. Mine) Index—1967 = 100[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	435.7	435.7	435.7	459.7	459.7	459.7	462.1	469.8	478.2	479.6	491.1	497.9	463.7
1981	508.7	542.9	542.8	545.2	552.8	572.0	589.7	597.3	619.9	629.1	642.5	643.7	582.2
1982	643.7	643.7	645.5	648.1	639.0	637.5	637.5	637.4	637.4	637.4	638.0	638.0	640.3
1983	636.0	635.9	634.2	621.7	603.1	605.1	613.3	610.4	610.4	610.4	612.0	612.3	617.1
1984[1]	612.2	612.0	611.2	610.4	611.1	610.8	610.8	610.8	610.8	610.8	610.2	614.7	611.3
1985[1]	615.0												

[1] Preliminary. *Source: Bureau of Labor Statistics* (0511-0101.02) T.89

Cobalt

World mine production of cobalt (which is almost invariably recovered as a byproduct of copper and nickel mining) increased some 9 percent in 1984, according to a preliminary estimate of the U.S. Bureau of Mines. The largest share of the increase was accounted for by Zaire, which continued to dominate world production—accounting for about 47 percent of total output. Zambia, the next largest producer accounted for about 14 percent of estimated total production. Production gains were also estimated for Canada, Cuba and the USSR.

There is no mine production of cobalt in the U.S. A small amount—about 5 percent of estimated reported consumption—is recycled from purchased scrap (recycled superalloy, cemented carbide scrap, and spent catalysts). The U.S. imports about 95 percent of its cobalt needs. Imports of cobalt were estimated to have increased by about 45 percent. Zaire, Zambia, and Canada were the main sources of imports in 1984. In the 1980–83 period, Zaire supplied 37 percent of U.S. imports; Zambia—12 percent; Canada—10 percent; Japan—7 percent.

U.S. consumption of cobalt materials (contained cobalt) increased 14 percent in 1984, based on monthly consumption reports. Imports of metal (including metal powder) increased 21 percent, and scrap consumption was up 22 percent. The increase in consumption of cobalt in 1984 represents the second annual increase following four years of decline. Superalloys accounted for about 36 percent of total consumption versus 35 percent in 1983, magnetic alloys about 18 percent versus 16 percent in 1983, catalysts—11 percent versus 10 percent a year earlier, and as a drier in paints or related usage—10 percent versus 14 percent in 1983. The superalloys are used mainly for industrial and aircraft gas turbine engines. Marked increases occurred in the manufacture of tungsten carbide and magnets.

Reported total consumer stocks of cobalt materials (contained cobalt) dropped 9 percent in 1984 to 1.31 million pounds from 1.44 million at the end of 1983. Metal stocks (including powder) of 881 thousand pounds at the end of 1984 were 22 percent lower than a year earlier. Oxide stocks increased 1 percent to 90 thousand pounds, and scrap stocks of 226 thousand pounds were up 42 percent from holdings at the end of December 1983. As of November 30, 1984, the National Defense Stockpile goal was 42,700 tons and total inventory 23,097 tons. In September 1984, the General Services Administration (GSA) awarded a contract to Inco. Ltd. of Canada for the purchase of 250 tons of cobalt (electrolytic rounds) for the National Defense Stockpile to be delivered within a year of the purchase. The purchase price was $11.70 per pound of electrolytic cobalt. This acquisition, along with 3,250 tons purchased in 1983 from Zaire and Zambia but not yet recorded as inventory, would bring the National Defense Stockpile inventory up to 62 percent of the 42,700 ton goal.

Surplus market conditions for cobalt were expected to prevail worldwide because supply continued to exceed world demand. Most of the surplus was in producer's stocks, according to the Bureau of Mines, which estimates U.S. apparent consumption in 1985 around 9,500 tons. From a 1983 base, U.S. demand for cobalt is expected to increase at an average annual rate of about 3 percent through 1990.

On July 2, 1984, the Zairian government announced that it was dissolving Sozacom, the state-owned metals marketing agency. All cobalt marketing was to be handled directly by Gecamines, the government mining company.

The U.S. spot price for cobalt began 1984 at ($6.10 per pound, rose steadily to $7.10 by March 1 when it jumped to $11.80 within a week. The upsurge was attributed to a temporary supply dislocation, but the price remained around $11.00 per pound and the average price of electrolytic cobalt in December, based on *Metals Week* prices, was $11.53 per pound.

World Mine Production of Cobalt In Short Tons of Recovered Cobalt Content

Year	Australia	Zaire (Congo Repub.)	USSR	France (Metal)	Canada	Cuba	Philippines	Finland	W. Germany (Metal)	Japan (Metal)	Norway (Metal)	Morocco	Zambia	New Caledonia	World Total
1980	2,177	17,000	2,300	745	1,767	1,778	1,467	1,141	330	3,160	1,405	924	4,850	395	34,178
1981	1,836	17,000	2,400	493	2,293	1,890	1,099	1,140	160	2,669	1,592	870	3,765	407	33,090
1982[1]	1,995	12,460	2,500	550	1,548	1,650	629	1,025	160	2,141	1,092	770	3,580	299	26,846
1983[1]	2,000	12,460	2,600		1,746	1,820	660	1,000	160	1,511	1,100		3,530	300	26,596
1984[2]	2,000	14,000	2,700		2,000	2,200	200	1,200					4,000		29,100

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

T.93

U.S. Salient Statistics of Cobalt In Thousands of Pounds of Contained Cobalt

Year	Net Import Reliance as a % of Apparent Consumption	Cobalt Pdt's Production	Consumer Stocks Dec. 31	Imports for Consumption	Consumption By End Uses											Price $ Per Pound[3]
					Steel Full Alloy	Stainless & Heat Resisting	Catalysts[4]	Super-Alloys	Tool Steel	Magnetic Alloys	Nonferrous Alloys	Drier in Paints, etc.[5]	Cutting & Wear-Resistant Mater.	Welding & Hard Facing Rods	Total	
1980	93	3,274	2,540	16,302	116	47	1,656	6,285	321	2,267	150	1,331	1,344	620	15,321	25
1981	92	3,302	1,411	15.594	141	35	1,279	4,195	170	1,687	131	1,378	1,076	488	11,680	17.26–25
1982	92	2,863	1,327	12,870	114	51	789	3,319	161	1,544	175	1,114	638	446	9,468	12.5–17.26
1983[1]	95	3,232	1,441	17,221	82	54	1,064	4,034	248	1,711	169	1,503	666	472	11,319	12.5
1984[2]	95		1,313	25,000	31	53	1,281	4,334	303	2,198	94	1,264	712	279	12,164	12.5

[1] Preliminary. [2] Estimate. [3] 97 to 99% cobalt, per contract. [4] Prior to 1976 are for chemical & ceramics. [5] Prior to 1979 are for salts & driers. *Source: Bureau of Mines*

T.94

Cocoa

World cocoa bean production for the October–September 1984/85 international marketing season was forecast by the USDA in early March 1985 at 1.81 million metric tons, 18 percent above the drought-reduced 1983/84 harvest, and almost 5 percent above the previous all-time high of 1.72 million in 1981/82. Favorable growing weather in West Africa and South America, and new plantings in Malaysia accounted for much of the increased forecast. Significant production increases were also forecast for Brazil, the Ivory Coast, and Malaysia.

Production in the Ivory Coast, the world's largest producer, was expected to reach a record 475,000 tonnes. Bean size and quality were termed good in contrast to the previous season and the government is said to be continuing its efforts to educate farmers in proper fermentation and drying procedures aimed at improving quality. The Harmattan (dry winds from the Sahara) were mild in the winter, which was helpful for development of the 1985 mid-crop. The Ivory Coast accounts for about 38 percent of U.S. cocoa bean imports, and 26 percent of world production.

Brazil is the world's second largest producer of cocoa beans, accounting for about 20 percent of world production. Brazilian output was also forecast by the USDA to be record large in 1984/85, at 375,000 tonnes, reflecting favorable growing conditions and young trees increasing in productivity. The Bahia main crop was expected to total a record-large 2.9 to 3.0 million bags (174,000 to 180,000 tonnes) and early indications were for a favorable 1985 temporaro crop. Brazil accounts for about 13 percent of U.S. cocoa bean imports, which is about the same percentage as imports from Ecuador, but less than the 17 percent accounted for by the Dominican Republic.

Global cocoa bean grindings in 1984/85 were projected by the USDA at a record 1.71 million tonnes, marginally above the year-earlier total in response to improved world economic conditions, expanded cocoa supplies, and some moderation in prices. An overall increase in consumer purchasing power, aggressive marketing in a number of key chocolate-consuming countries, and changing taste preferences which have emphasized chocolate candy, all contributed to increased consumption. (According to the Census Bureau, the volume of chocolate candy shipped in the U.S. in 1983 was about 2.2 billion pounds, representing 57 percent of all U.S. candy shipments.) U.S. consumers purchased about 4.3 billion pounds of candy in 1984, up nearly 4 percent from 1983. Demand for U.S.-produced candy rose about 3 percent while consumption of imported candy, which accounts for about 5 percent of total candy, increased about 14 percent. The quantity of chocolate candy imported into the U.S. in 1984 soared about 49 percent to 88 million pounds. The quantity of U.S. chocolate candy exports in 1984 increased by about 11 percent, due primarily to marketing efforts by U.S. candy bar manufacturers.

World carryover stocks of cocoa beans, as of September 30, 1985, were projected to increase by around 79,000 tonnes (allowing for a 1-percent weight loss for production), compared with estimated stock drawdowns of 186,000 and 121,000 tonnes, respectively in the past two seasons. Carryover stocks were expected to represent about a 3-months supply based on the estimated consumption rate.

The current International Cocoa Agreement (ICCA), which had been extended to September 30, 1985, functioned without the world's largest producer—the Ivory Coast, and the world's largest consumer—the U.S. In addition, it was hampered by a lack of sufficient funds to purchase cocoa for the buffer stock. No additions to the buffer stock were made since March 1982, when the cumulative total was 100,345 tonnes. Attempts to negotiate a new agreement at a conference in Geneva in early March 1985 were unsuccessful, ending on unresolved differences regarding price support levels. The current 1980 Agreement contained provisions for its extension for another year, although it was uncertain whether extension would be agreed upon in a Council meeting scheduled for July.

Futures Markets

Cocoa futures are actively traded on the Coffee, Sugar & Cocoa Exchange in New York and also on the London Terminal Market.

World Cocoa Supply and Demand In Thousands of Metric Tons

Crop Year[1]	Stocks Oct. 1	Net World Crop[2]	Total Availability	Seasonal Grindings	Closing Stocks	Stock Change	Crop Year[1]	Stocks Oct. 1	Net World Crop[2]	Total Availability	Seasonal Grindings	Closing Stocks	Stock Change
1977–8	279	1,488	1,767	1,399	368	+ 89	1981–2	559	1,704	2,263	1,602	661	+102
1978–9	368	1,480	1,848	1,459	389	+ 21	1982–3	661	1,518	2,179	1,621	558	−103
1979–0	389	1,607	1,996	1,489	507	+118	1983–4[3]	558	1,501	2,059	1,692	367	−191
1980–1	507	1,641	2,148	1,589	559	+ 52	1984–5[4]	367	1,722	2,089	1,714	375	+ 8

[1] Crop year season is OCT.–SEPT. [2] The Net World Crop is obtained by adjusting the Gross World Crop for one per cent loss in weight. [3] Preliminary. [4] Forecast. *Source: Gill and Duffus, Ltd.*

T.95

World Production of Cocoa Beans in Principal Producing Countries In Thousands of Metric Tons

Crop Year[1]	Brazil	Cameroon	Colombia	Dominican Rep.	Ecuador	Equatorial Guinea[4]	Ghana	Ivory Coast	Malaysia	Mexico	Papua New Guinea	Nigeria	Sao Tome & Principe	Trinidad & Tobago	Venezuela	World Total
1980-1	351	120	36	33	85	8	258	412	49	32	27	155	7	3	14	1,685
1981-2	315	120	39	43	88	8	225	456	61	42	29	182	5	3	15	1,725
1982-3	339	106	40	43	55	9	179	360	68	43	28	156	5	3	14	1,542
1983-4[3]	308	109	41	42	55	9	159	405	90	38	30	125	5	3	14	1,529
1984-5[2]	375	115	42	44	100	10	176	475	125	40	30	150	6	3	15	1,807

[1] Crop years are for the 12 months October 1 to September 30. [2] Forecast. [3] Preliminary. [4] Includes Fernando Po & Rio Muni. *Sources: Foreign Agricutural Service; U.S.D.A.* T.96

World Absorption (Consumption) of Cocoa[2] In Thousands of Metric Tons

Year	Japan	Australia	Belgium	Brazil	Canada	Colombia	France	W. Germany	Netherlands	Spain	Italy	Switzerland	USSR	United King.	United States	World Total
1980	25	11	23	200	12	31	48	158	133	35	34	17	130	65	142	1,511
1981	29	12	29	195	17	35	52	167	141	37	35	18	120	85	190	1,596
1982	32	9	29	170	16	38	52	175	148	37	39	18	125	88	199	1,608
1983[1]	34	8	33	198	16	39	53	180	157	38	36	18	140	77	194	1,648
1984[3]	30	6	35	214	19	38	50	194	161	35	40	18	140	89	209	1,716
1985[4]	28	2	35	210	16	38	50	185	155	35	40	18	150	85	200	1,717

[1] Preliminary. [2] Figures represent the "absorption," "disappearance" or "grindings" of cocoa beans in each country—in other words, net imports of cocoa beans adjusted for changes in stock. [3] Estimate. [4] Forecast. *Source: Gill & Duffus, Ltd.* T.98

World Exports of Cocoa Beans by Principal Producing Countries In Thousands of Metric Tons

Year	Brazil	Costa Rica	Dominican Repub.	Ecuador	Equatorial Guinea	Cameroon	Ghana	Malaysia	Ivory Coast	Papua New Guinea	Nigeria	Sao Tome & Principe	Trinidad & Tobago	Venezuela	Togo	Grand Total
1980	123.6	2.2	23.4	14.1	6.0	80.5	218.6	30.6	305.3	28.8	133.9	7.0	2.1	7.8	14.5	1,046
1981	125.2	2.0	27.3	24.1	7.5	82.4	180.9	42.4	437.2	27.8	109.0	6.0	3.0	8.0	17.2	1,146
1982	143.5	1.9	38.2	38.0	7.5	66.4	217.1	57.7	326.3	28.2	136.7	6.0	2.4	9.5	10.1	1,138
1983	152.8	.7	38.3	7.0	8.0	80.1	177.3	57.2	286.4	26.3	152.3	3.1	2.0	9.5	9.5	1,076

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.100

Raw Cocoa Grindings in Selected Countries In Thousands of Metric Tons

Year	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
	France					Germany (West)					Holland				
1980	43.1	12.5	10.9	9.1	10.7	151.2	40.2	35.4	32.9	42.6	132.6	35.1	31.4	29.5	36.7
1981	47.0	12.6	12.0	9.6	12.9	159.4	41.7	37.6	35.4	44.7	141.0	36.0	34.3	32.7	38.0
1982	45.5	13.1	12.3	9.7	10.4	167.0	45.1	39.9	35.8	46.3	148.4	38.4	34.9	33.7	41.3
1983	47.6	12.2	12.9	10.9	11.7	179.5	45.7	41.0	43.0	49.8	156.9	40.5	37.9	35.2	43.4
1984[1]		14.0	12.4			193.5	49.9	48.6	42.4	52.6	161.4	44.4	40.0	35.0	42.1
	Italy					United Kingdom					United States				
1980	33.8	8.0	8.4	8.1	9.3	65.3	15.5	16.1	15.5	18.2	142.2	33.5	31.5	34.9	42.4
1981	35.1	8.6	8.1	5.8	12.6	85.3	21.7	21.3	19.2	23.1	190.2	48.4	46.0	48.8	47.1
1982	39.2	9.6	10.1	6.0	13.6	88.1	25.3	21.1	19.6	22.1	199.1	47.7	50.6	50.1	50.7
1983	36.4	8.4	7.9	8.1	12.0	76.7	19.8	18.1	17.4	21.3	193.6	45.9	46.7	47.8	53.2
1984[1]		8.0	5.6			89.5	22.3	21.9	21.1	24.2	164.4	42.4	41.6	40.9	39.5

[1] Preliminary. *Source: Gill and Duffus, Ltd.* T.97

Imports of Cocoa Butter—Selected Countries In Metric Tons

Year	Argentina	Australia	Austria	Belgium	Canada	Finland	France	West Germany	Italy	Japan	Netherlands	Norway	Sweden	Switzerland	UK	USA	USSR	Yugoslavia
1980	1,868	4,532	2,485	12,388	3,717	2,057	14,285	22,790	1,211	6,264	16,445	1,855	4,155	9,117	29,597	34,658	—	1,054
1981	1,923	4,410	3,461	11,960	4,505	2,228	14,170	29,358	1,667	10,352	11,021	1,875	4,234	10,208	19,549	43,196	—	1,965
1982	1,734	5,419	3,382	12,281	4,860	2,333	14,008	30,564	1,631	10,615	16,225	2,083	4,451	9,982	25,820	37,325	—	1,009
1983[1]		6,067	3,535	12,128	5,313	2,428	16,690	30,581	2,151	9,947	20,224	1,892	4,704	10,224	31,581	47,981	—	
1984[2]		6,600	3,900	12,200	5,600	2,300	17,100	35,000	2,000	9,000	25,000	2,100	4,500	9,950	29,500	53,000		

[1] Preliminary. [2] Estimate. *Source: Gill & Duffus Group PLC* T.97a

COCOA

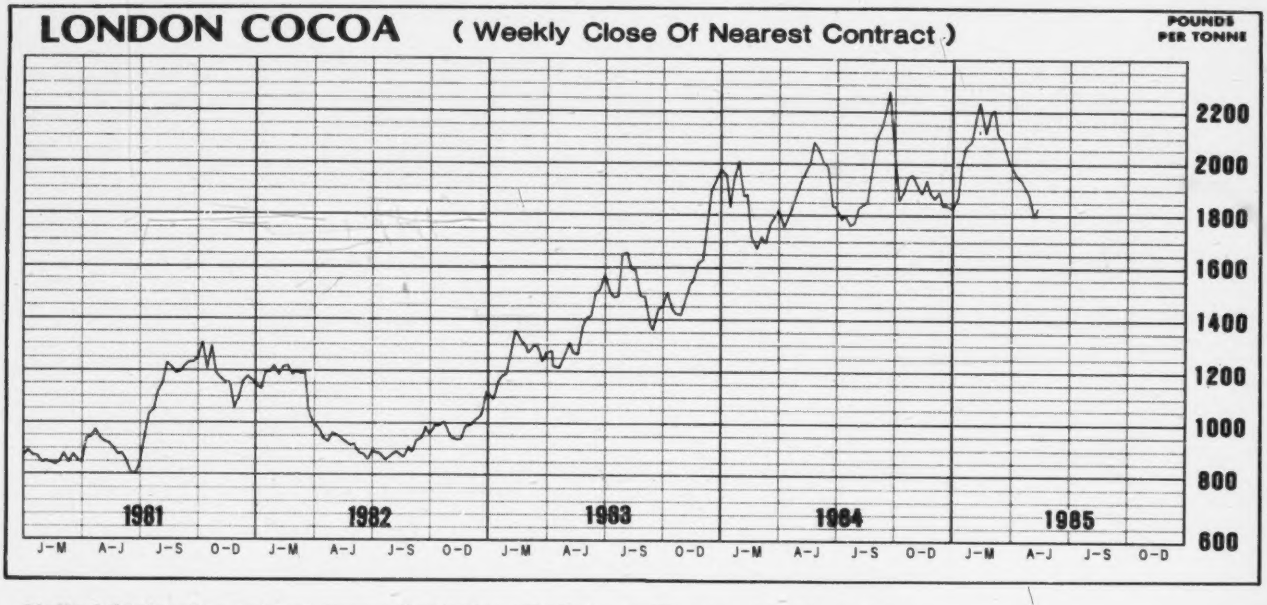
Imports of Cocoa Liquor—Selected Countries Imports of Cocoa Powder—Selected Countries

In Metric Tons

	Imports of Cocoa Liquor							Imports of Cocoa Powder							
Year	France	West Germany	Netherlands	Poland	UK	USA	USSR	Belgium	France	West Germany	Italy	Netherlands	Sweden	UK	USA
1978	16,282	741	3,901	7,485	3,859	43,679	—	3,079	3,529	6,912	3,955	2,096	2,469	1,022	79,263
1979	15,872	795	4,136	25,755	4,784	47,828	5,000	3,642	4,368	10,846	5,266	2,970	2,656	1,747	64,080
1980	15,688	1,922	7,634	23,822	1,928	43,796	5,200	3,335	5,905	10,693	6,142	3,018	3,457	1,885	65,606
1981	15,457	2,151	9,262	26,835	1,914	33,109	16,000	3,503	7,963	12,935	6,478	3,255	3,551	2,393	77,879
1982	13,871	2,196	13,519		2,283	31,419	8,700	3,770	7,609	13,524	6,673	2,974	3,872	3,284	60,563
1983[1]	15,164	2,288	14,216		3,829	45,477	15,425	3,895	8,527	13,886	7,964	3,009	3,806	3,014	78,968
1984[2]	21,000	3,000	13,000		2,200	49,000		4,000	9,800	13,500	5,000	3,700	4,000	3,800	91,000

[1] Preliminary. [2] Estimate. *Source: Gill & Duffus Group PLC*

T.97b



LONDON COCOA (Weekly Close Of Nearest Contract)

United States Imports of Cocoa (Includes Shells) In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	19.4	20.3	27.9	20.5	16.5	12.4	16.1	14.7	7.3	15.9	18.6	20.2	209.7
1979	27.3	26.7	14.6	12.8	8.8	13.7	11.8	15.7	5.7	10.1	10.0	8.0	165.2
1980	11.1	9.2	8.0	19.5	15.4	12.0	16.9	9.6	8.2	9.6	9.4	19.9	148.5
1981	13.5	27.8	19.2	30.4	27.1	24.1	19.3	22.0	20.3	24.1	5.8	11.5	245.0
1982[1]	10.0	29.0	17.6	15.3	16.8	11.9	13.0	20.3	14.3	14.4	14.4	17.4	194.2
1983[1]	46.0	42.7	19.0	3.8	14.4	11.1	9.6	7.2	6.1	5.3	7.7	8.2	181.0
1984[1]	15.5	21.2	28.7	16.9	24.7	15.3	13.3	10.8	10.4	5.0	10.8		

[1] Preliminary. *Source: Department of Commerce*

T.102

Bahia Crops In Thousands of Bags of 60 Kilos

Year	Total Crop Brazilian Crop Year	Temporao Brazilian Crop Year	Main-Mid March (Arrivals)	Main Crop (Oct.–Apr.)	Temporao International Crop Year	Total Crop International Crop Year
1977–78	3,989	2,102	1,769	1,887	2,524	4,411
1978–79	4,329	2,524	1,762	1,805	3,129	4,934
1979–80	5,387	3,129	2,158	2,257	2,383	4,640
1980–81	5,041	2,383	2,646	2,658	2,892	5,550
1981–82	4,609	2,892	1,680	1,718	3,170	4,888
1982–83	5,284	3,170	1,961	2,114	3,084	5,198
1983–84[1]	5,876	3,084	2,517	2,792	1,786	4,578

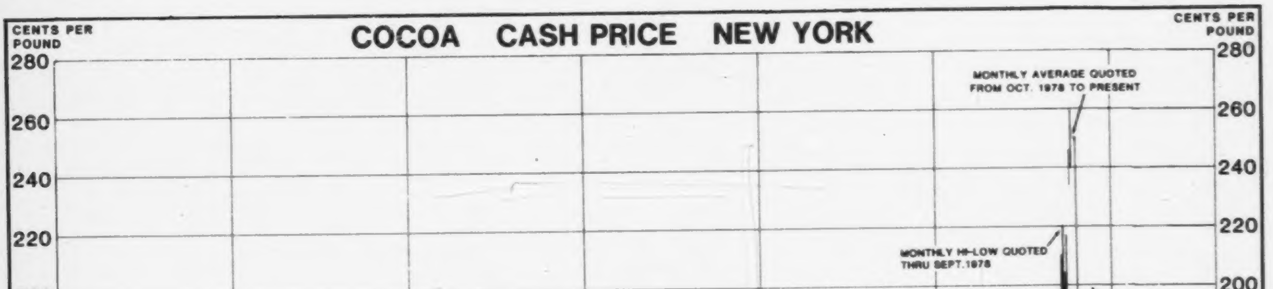
[1] Preliminary. *Source: Gill & Duffus Group PLC*

T.102a

Spot Cocoa Bean Prices (ACCRA) in New York · In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	173.0	190.3	207.5	198.3	199.3	199.3	199.3	199.3	256.0	250.0	250.0	250.0	214.4
1978	165.0	140.0	178.0	179.0	170.0	155.0	161.0	175.0	189.0	183.0	199.0	196.0	174.2
1979	193.0	177.0	176.0	157.5	165.0	172.0	158.0	157.0	166.0	159.0	154.5	155.0	160.4
1980	163.8	173.5	157.0	147.0	135.0	125.3	134.5	120.0	122.0	119.0	120.0	108.0	135.4
1981	109.0	110.0	112.0	115.0	104.0	89.0	109.5	112.0	117.0	113.0	103.0	109.0	108.5
1982	116.0	107.0	102.0	99.0	94.0	80.0	83.0	86.0	87.0	88.0	82.0	85.0	92.4
1983	91.0	102.0	99.0	96.0	100.0	120.0	110.0	122.0	105.0	110.8	115.0	127.0	108.2
1984	132.0	134.0	133.5	128.3	135.0	128.5	121.5	117.0	121.0	125.0	126.0	113.0	126.2
1985													

Source: Bureau of Labor Statistics (0191-0221) T.105



COCOA

Visible Stock of Cocoa in Philadelphia (Delaware River) Warehouses, at End of Month In Thousands of Bags

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	60.4	77.7	107.7	114.4	110.6	101.7	100.2	124.1	132.5	106.3	81.3	86.3
1980	64.6	52.5	40.0	33.4	53.3	45.3	38.8	47.3	55.8	21.6	11.8	33.6
1981	38.1	15.5	15.4	45.7	189.7	227.4	246.6	255.8	307.5	271.9	234.6	231.3
1982	190.1	163.4	174.1	163.2	154.0	125.7	104.6	64.2	51.8	64.3	69.3	98.5
1983	123.6	192.4	281.5	356.5	344.7	338.9	297.7	258.5	204.5	119.8	69.2	43.0
1984	59.5	69.9	105.4	98.8	148.3	168.0	158.3	187.6	165.3	99.7	83.6	217.1
1985	221.3	282.0										

Source: Coffee, Sugar & Cocoa Exch., Inc. T.107

Visible Stock of Cocoa in New York Warehouses[1], at End of Month In Thousands of Bags

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	35.2	33.6	31.1	31.4	40.2	44.2	125.5	127.5	104.7	101.7	90.0	87.3
1980	85.3	68.2	18.0	29.4	42.8	84.3	94.8	78.3	71.6	52.7	69.5	22.7
1981	37.5	14.9	29.3	66.5	120.3	93.1	75.8	115.3	84.6	62.1	55.5	66.2
1982	33.4	61.3	66.7	57.3	99.0	98.6	115.8	137.7	108.8	97.1	96.1	68.9
1983	64.7	80.1	80.0	88.9	136.4	184.8	178.7	173.5	138.6	109.5	103.0	93.9
1984	59.3	53.2	52.3	52.5	70.7	57.2	93.8	99.9	109.2	62.8	36.3	32.4
1985	34.7	22.0										

[1] In licensed & unlicensed warehouses of storage companies licensed by the Coffee, Sugar & Cocoa Exch. *Source: Coffee, Sugar & Cocoa Exch., Inc.* T.106

U.S. Spot Cocoa Prices for Selected Origins of Cocoa Beans and Products (Dollars per metric ton)

	Cocoa Beans				Chocolate Liquor		Cocoa Butter		Cocoa Cake
Crop Year	Ivory Coast	Brazil	Dominican Republic	Ecuador	Ecuador	Brazil	African	Other	10–12% Fat
1982/83	2,031	1,999	1,815	1,886	2,310	2,440	4,294	4,191	872
1983/84	2,509	2,611	2,361	2,477	3,025	3,119	5,281	5,178	1,610
1984/85									
October	2,430	2,562	2,219	2,282	2,873	2,965	5,211	5,166	1,296
November	2,457	2,620	2,246	2,307	2,862	2,997	5,270	5,227	1,254
December	2,317	2,489	2,163	2,185	2,706	2,857	5,152	5,107	1,110
January	2,313	2,389	2,173	2,191	2,758	2,823	5,470	5,414	997
February	2,342	2,400	2,194	2,236	2,816	2,955	5,695	5,608	887
March									

Source: The Cocoa Merchants Association. All prices are net ex dock or ex warehouse, U.S. Eastern seaboard North of Hatteras, for merchandise physically available in interstate commerce, in truckload quantities, regular commercial quality, and are nominal; *Foreign Agricultural Service, U.S.D.A.* T.99a

Month End Open Interest of Cocoa Futures at New York In Contracts

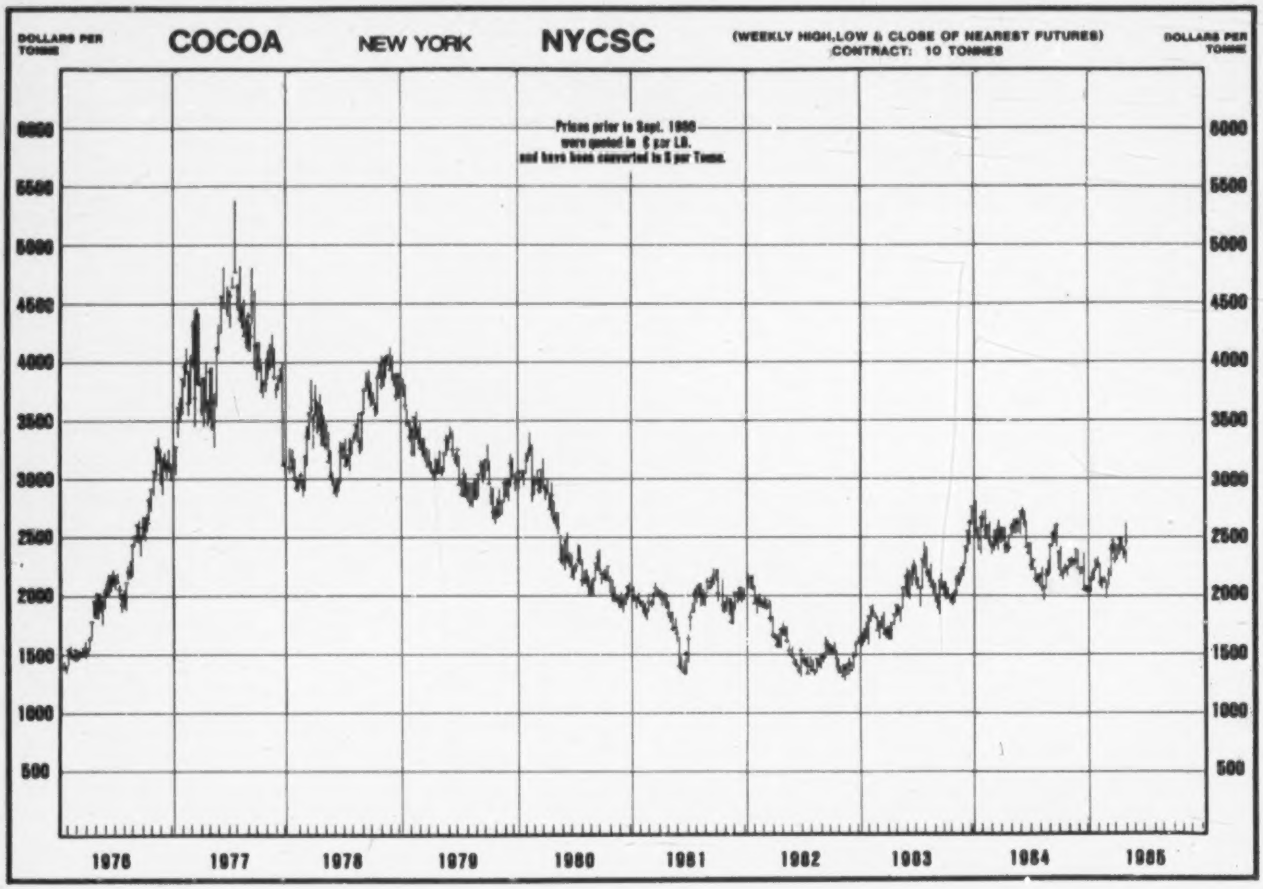
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	7,782	6,506	6,587	6,135	7,392	6,833	6,792	6,415	6,262	7,562	7,050	6,840
1980	8,314	7,723	6,744	6,639	8,114	6,682	8,900	9,529	13,548	14,282	13,210	11,978
1981	14,269	14,064	16,209	13,721	13,929	11,853	16,328	16,897	17,042	18,823	15,388	14,137
1982	14,554	14,421	15,129	14,036	15,563	14,083	15,954	14,678	16,439	18,615	17,600	19,988
1983	25,989	22,401	22,155	24,796	29,457	29,403	28,447	29,275	28,282	27,890	29,266	29,153
1984	29,712	26,116	26,511	22,277	26,795	23,817	23,691	23,397	22,106	22,505	21,253	20,936
1985	25,616	23,817										

Source: Coffee, Sugar & Cocoa Exch., Inc. T.103

Volume of Trading of Cocoa Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	19,447	17,626	16,430	14,784	21,063	23,282	18,160	21,125	16,929	25,555	22,321	15,099	232,183
1980	23,600	40,410	25,066	23,897	26,170	29,673	34,158	27,265	45,437	43,945	39,770	28,954	388,971
1981	32,916	43,352	37,056	52,875	32,691	54,479	55,525	53,557	43,764	63,751	53,674	39,011	562,651
1982	42,498	44,744	52,468	52,591	38,332	50,693	45,504	45,457	61,137	67,652	48,243	56,744	607,964
1983	88,429	96,636	82,115	91,851	83,275	135,536	102,212	112,031	103,023	70,032	97,781	98,619	1,162,540
1984	151,282	113,788	102,622	103,415	113,757	107,219	75,180	101,732	75,294	69,322	74,357	33,927	1,127,752
1985	86,748	83,988											

Source: Coffee, Sugar & Cocoa Exch., Inc. T.104



High, Low & Closing Prices of March Cocoa Futures at New York In Dollars per Tonne[1]

Year of Delivery		Year Prior to Delivery										B		Delivery Year	B	Life of Delivery
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Range
1980[1]	High	168.75	162.00	153.85	159.50	163.40	159.60	145.10	146.75	149.90	142.10	145.40	146.85	154.25	140.00	174.50
	Low	154.70	153.50	147.65	149.10	153.20	140.15	135.25	136.90	122.00	124.00	134.00	131.50	127.90	130.75	122.00
	Close	163.60	154.25	151.50	157.15	160.75	144.80	136.20	144.10	126.20	140.95	134.00	144.10	134.95	134.50	—
1981	High	3350	3245	3011	2830	2650	2562	2350	2454	2305	2217	2105	2084	2017	2075	3350
	Low	3085	2940	2785	2422	2385	2260	2210	2195	2121	1960	1905	1922	1795	1915	1795
	Close	3110	2960	2792	2425	2393	2275	2226	2220	2226	1965	2050	1944	1947	2025	—
1982	High	2260	2300	2250	2125	1920	2215	2290	2360	2292	2065	2085	2184	2020	1965	2360
	Low	2170	2190	2081	1890	1625	1808	2160	2196	1922	1816	1910	1942	1860	1780	1780
	Close	2224	2210	2130	1935	1720	2202	2263	2283	2005	1911	2054	1942	1924	1806	—
1983	High	2145	2105	1875	1835	1663	1640	1604	1696	1669	1495	1650	1840	1919	1816	2295
	Low	2071	1840	1738	1657	1508	1485	1451	1534	1435	1383	1447	1565	1640	1688	1383
	Close	2071	1854	1802	1660	1605	1518	1527	1604	1467	1465	1603	1826	1704	1691	—
1984	High	2015	1958	1990	2325	2390	2460	2440	2195	2124	2272	2759	2805	2626	2645	2805
	Low	1785	1790	1780	1895	2070	2055	2080	1907	1953	1967	2175	2353	2355	2425	1653
	Close	1838	1835	1990	2168	2224	2369	2113	2089	1989	2224	2755	2521	2462	2617	—
1985	High	2455	2510	2500	2560	2430	2234	2305	2350	2248	2291	2133	2309	2332		
	Low	2240	2350	2343	2401	2230	1998	1990	2150	2118	2056	2034	2018	2071		
	Close	2363	2489	2435	2401	2280	2000	2275	2199	2224	2117	2052	2271	2140		
1986	High	2135														
	Low	2000														
	Close	2028														

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[1] Prices prior to the 1981 delivery are in cents per pound. To convert to $ per tonne, multiply the ¢ per lb. by 2204.6. *Source: Coffee, Sugar & Cocoa Exch., Inc.*

T.108

Coconut Oil and Copra *(See feature article on page 21T)*

The USDA in early 1984 estimated 1984/85 world production of copra at 4.65 million metric tons, considerably above estimated 1983/84 output of 4.06 million tonnes. World copra crush in 1984/85 was estimated at 4.39 million tonnes, nearly 15 percent above crushings in the previous season, and ending stocks were projected at 70 thousand tonnes, about unchanged from stocks at the end of the 1983/84 season. Copra is the dried meat of the coconut, from which oil is obtained. The Philippines is the world's largest producer of copra, usually accounting for more than 50 percent of total production and a slightly smaller percentage of world coconut oil production.

World production of coconut oil in the 1984/85 season was estimated by the USDA at 2.75 million tonnes versus a preliminary estimate of 2.40 million in 1983/84. Exports were forecast at 1.23 million tonnes versus only 886 thousand tonnes in 1983/84, and consumption of 2.71 million tonnes was forecast versus 2.42 million in 1983/84. World coconut oil stocks at the end of the 1984/85 season were projected at 218 thousand tonnes versus an estimated 180 thousand at the end of the 1983/84 season. The U.S. is the world's largest importer of coconut oil, most of which is utilized for inedible purposes. The structure of U.S. demand for coconut oil is considered to be relatively inelastic.

Notwithstanding various replanting programs in the Philippines and Indonesia and the development of higher-yielding, faster-maturing hybrid varieties of coconut palm, little progress in output has been recorded to date. In addition, fresh food use of coconuts—a staple in Philippine and Indonesian cuisine—competes actively for available nuts and is a constraint on copra production, according to the USDA. Nevertheless, the Philippine government was reported to be reviving a coconut replanting scheme which had been suspended in 1982 when the government stopped collecting a levy which funded it. Export tax receipts were to fund this program of replanting with early-bearing and high-yielding hybrids. More than 25 percent of the estimated 400 million coconut trees in that country were reported to be nearly 60 years old. Meanwhile, the lagged effects of improved rainfall and expanded bearing tree numbers were expected to result in increased Philippine coconut oil output. Potential damage from typhoons presents a periodic threat to output. The wind associated with these storms usually causes heavy fruit drop which increases near term crushings but reduces production potential if a substantial number of trees are uprooted. Yet, the same storms also bring beneficial rain. Increased rainfall has been the most important variable influencing yearly changes in copra production.

In late 1984, supplies of coconut oil continued in short supply, and commanded near-record premiums over soybean oil both in the U.S. and in Europe. However, both coconut oil prices and the premium for coconut oil over soybean oil were reduced later.

World Copra Production by Principal Countries In Thousands of Metric Tons

Crop Year	Naupu	Fiji	India	Indonesia	Jamaica	Malaysia	Mexico	Mozambique	Papua-New Guinea	Philippines	Solomon Isl.	Sri Lanka	Tanzania	Thailand	Ivory-Coast	New Hebrides	Vietnam	Tons World Total
1978-9	35	22	317	1,040	28	213	130	65	159	1,823	33	166	27	50	14	49	39	4,367
1979-0	46	25	329	1,158	29	210	120	68	145	1,960	32	93	29	50	21	34	39	4,553
1980-1	42	25	329	1,284	25	208	130	55	158	2,256	32	128	29	30	24	47	39	4,986
1981-2	42	25	335	1,205	28	206	100	50	132	2,077	33	174	29	35	26	44	40	4,734
1982-3	42	25	268	1,091	29	208	110	50	120	2,015	31	131	29	30	27	45	40	4,467
1983-4[1]	42	25	300	1,205	30	212	100	50	125	1,417	33	72	29	40	27	47	41	3,953
1984-5[2]	42		338	1,203		220	100	50	128	2,000	33	129				47		4,655

[1] Preliminary. [2] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.109

World Coconut Oil Exports by Principal Countries In Thousands of Metric Tons

Crop Year	Sri Lanka (Ceylon)	Singapore[2]	Indonesia	Malaysia[2]	Philippines Registered	Ivory Coast	Netherlands	Mozambique	EC-10	Fiji	Papua New Guinea	Total Oceania	World Total
1978-9	32	42	2	66	795	9	31	5	165	17	28	70	1,092
1979-80	3	35	41	65	914	9	35	4	133	18	34	75	1,204
1980-1	21	63	4	64	1,047	13	41		67	15	29		1,338
1981-2	39	50	0	60	949	16	33		82	15	33		1,247
1982-3	38	30	8	69	1,020	16	35		65		22		1,308
1983-4[1]	40	24	20	65	586	20	20		52		22		859
1984-5[3]			3	66	949				63				1,239

[1] Preliminary. [2] Net exports. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.110

Supply & Distribution of Coconut Oil in the United States In Millions of Pounds

Year Begin. Oct. 1	Imports[2]	Stocks Dec. 31[3]	Total Supply	Exports & Shipments	Domestic Disappearance			Production of Coconut Oil (Refined)				
					Total	Edible Pods	Inedible Pods	Total	Jan.–March	April–June	July–Sept.	Oct.–Dec.
1978–9	967	145	1,112	8	947			768.3	187.9	207.5	196.6	176.2
1979–0	810	157	967	30	785			595.6	183.9	137.4	143.8	129.7
1980–1	1,122	152	1,274	38	1,032	337.6	452.1	644.7	146.1	153.4	156.0	196.1
1981–2	960	204	1,164	28	976	337.9	411.5	700.3	193.3	175.3	171.9	159.8
1982–3[1]	882	160	1,042	21	875	299.5	493.9	665.7	162.1	162.4	168.7	172.5
1983–4[1]	900	146	1,046	41	905	375		692.6	163.1	186.0	167.1	176.4
1984–5[1]	965	100	1,065	25	940			616.2	161.3	175.7	145.1	134.1

[1] Preliminary. [2] Imports for consumption. [3] Includes G.S.A. stockpile & in U.S. bond. *Sources: Bureau of the Census; Agricultural Marketing Service*

T.112

U.S. Consumption of Coconut Oil in End Products In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	67.6	58.2	68.1	70.7	67.7	71.8	61.8	75.2	81.1	87.8	78.5	76.8	865.3
1976	80.3	78.4	88.1	83.3	84.9	90.3	80.2	82.6	80.8	79.2	87.1	75.1	990.3
1977	73.4	69.9	82.6	73.0	73.9	79.1	63.1	71.9	73.1	76.3	77.4	65.0	878.7
1978	69.3	71.0	81.5	88.9	87.6	76.1	73.6	79.0	72.4	84.0	75.4	55.4	914.2
1979	72.7	66.3	83.3	69.1	69.9	62.0	50.4	58.5	58.0	54.4	55.3	48.5	748.5
1980	55.9	49.9	59.5	55.8	58.1	56.3	56.2	51.0	62.5	66.9	63.1	58.3	693.5
1981	67.6	65.0	71.1	68.2	64.0	70.4	58.0	70.4	66.7	73.2	59.8	52.2	786.6
1982	63.3	59.6	61.7	58.5	64.7	64.2	62.2	63.9	66.1	60.2	70.5	60.6	755.5
1983	62.0	64.8	61.1	64.8	80.2	74.9	70.5	61.2	64.3	68.4	66.2	61.0	799.4
1984[1]	71.5	68.5	66.0	67.0	72.6	70.9	61.8	70.7	48.1	63.4	56.6	45.3	762.4
1985[1]	53.4	56.9											

[1] Preliminary. *Source: Bureau of the Census*

T.114

Stocks of Coconut Oil (Crude & Refined) in the United States[2] In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1976	114.1	140.6	135.4	113.6	114.1	125.3	125.6	127.3	150.3	127.4	142.4	137.9
1977	123.0	163.9	152.0	156.3	170.7	162.7	150.5	160.5	178.8	136.7	128.6	114.6
1978	133.7	146.5	176.7	173.6	166.8	140.2	146.0	132.6	130.6	144.8	123.1	120.2
1979	154.6	211.3	216.0	89.1	47.5	156.4	119.5	132.2	138.7	167.1	235.0	218.8
1980	309.7	357.7	248.4	246.5	211.2	211.9	220.6	191.6	210.1	182.6	225.6	264.6
1981	300.1	309.2	359.6	322.5	309.5	289.5	285.1	265.8	260.3	227.7	170.0	168.7
1982	173.1	153.6	186.0	160.7	153.0	170.8	194.8	184.3	166.9	159.7	144.5	144.5
1983	127.2	143.8	144.7	144.0	162.9	168.9	123.6	127.7	131.8	145.3	162.5	175.6
1984[1]	175.2	215.5	193.8	165.0	150.2	121.8	78.7	90.9	100.2	111.0	119.8	107.2
1985[1]	121.4	128.0	87.7									

[1] Preliminary. [2] Includes coconut oil held in U.S. customs bond. *Source: Bureau of Census*

T.115

Average Price of Coconut Oil (Crude)[1] at the Pacific Coast (United States) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	16.1	16.1	17.0	17.1	17.2	18.9	22.3	21.6	23.8	23.0	23.8	26.3	20.3
1977	25.6	27.4	34.7	37.3	34.3	29.9	24.8	21.8	22.9	23.9	24.9	26.4	27.8
1978	26.4	27.1	31.9	30.5	29.9	32.4	32.9	32.3	39.2	41.6	42.6	42.6	34.1
1979	46.3	47.2	47.0	49.9	53.2	57.3	57.3	53.7	44.8	42.5	42.4	40.2	48.5
1980	40.8	40.6	37.5	34.1	29.3	29.5	30.4	29.9	29.1	27.9	29.4	27.8	32.1
1981	26.3	25.0	23.9	24.3	26.0	27.4	28.1	26.4	24.3	26.6	26.6	25.4	25.9
1982	24.8	24.8	22.9	23.0	23.3	23.1	21.1	19.3	19.8	20.0	N.A.	N.A.	22.2
1983	N.A.	20.3	21.0	25.6	28.4	35.8	33.7	N.A.	N.A.	N.A.	N.A.	44.9	27.5
1984	49.2	54.3	53.0	50.8	63.0	69.9	73.3	70.0					
1985													

[1] Tank cars, f.o.b. mill. Includes 1¢ import duty. *Source: Bureau of Labor Statistics*

T.116

Coffee

The USDA in January 1985 estimated the 1984/85 world coffee crop at 93.6 million bags, 4 percent above the 1983/84 harvest. In 1984/85, about 68.7 million bags or 73.4 percent of world output was expected to be of the Arabica variety, down from 71.2 million bags or 78.8 percent of the 1983/84 crop. A greater expansion has occurred in Robusta producing countries over the past 25 years. Within countries which produce both types of coffee, such as Brazil, Cameroon, and Ecuador, the higher yielding, more disease resistant Robusta species have been preferred.

World coffee exports were expected to total 69.2 million bags during crop year 1984/85, 2 percent above the previous season's level. Members of the International Coffee Organization (ICO) were expected to export 58.0 to 59.5 million bags to member importing countries and 9.5 to 10.5 million to non-member countries. With Cuba having newly joined the ICO, non-member shipments were expected to total no more than 250,000.

An estimated greater-than-90-percent of the world's coffee stocks were held by producers and the amount they held continued to increase despite a growing concern with quality. Stocks held by producing countries during the current crop year were forecast to increase by about 3.2 million bags. At this level, stocks would have represented 53 percent of the anticipated world consumption for the year and 70 percent of exports. The ICO began a study to determine what portion of these stocks were of export quality. While some countries such as the Ivory Coast were extremely hard pressed to meet their ICO quotas for 1983/84, others with heavy stocks and financial problems continued to seek outlets in non-ICO markets at substantially reduced prices. The largest stocks were held by Brazil and Colombia. Inventories in importing member countries of the ICO were estimated to have decreased from 4.5 million bags on June 30, 1983 to about 3.9 million a year later. Stocks in the U.S. were estimated to have decreased from 1.2 million bags to 600,000.

The U.S. was the largest single market for coffee in the world. Despite a steady long-term decline in U.S. coffee consumption on a per capita basis, coffee remained the most popular beverage in the U.S. in 1984, narrowly edging the percentage of consumers of soft drinks. According to information provided by Paton's *Complete Coffee Coverage*, the amount of green coffee roasted in the U.S. (including the amount used in the production of soluble coffee) to December 1, 1984, was approximately 102.9 percent of the amount roasted in a comparable period a year earlier and about 100.9 percent of the amount roasted in 1982. The U.S. Bureau of Census reported that imports of green coffee into the U.S. in 1984 totaled approximately 17.7 million 60-kilo bags compared with 16.4 million in 1983.

Marketing year 1983/84 exports of coffee from Colombia were officially placed at nearly 9.97 million bags, 8.6 percent above a year earlier. Heavy rains and cloud cover in late 1984 reportedly reduced Colombia's coffee harvest in 1984/85 by up to 10 percent. Colombia's exports to non-ICO members in marketing year 1983/84 were put at 836,446 bags, 18 percent over the previous year.

On October 1, 1984, member countries of the ICO agreed on a system for coffee year 1984/85 (October/September) aimed at bringing market supply and demand among members into equilibrium at $1.30 per pound. Under the agreement, the annual global quota was to be set at 59.0 million bags for 1984/85 within a 54.0-64.0 million bag range. The ICO price defense system had an outer range of $1.15–$1.45 and a preferred inner range of $1.20–$1.40 per pound. When prices rose to or above $1.40 and remained there for 15 days, two additional 1.0 million bags increments were to be released. A rise to the outer range of the price ceiling would have triggered two more increases of a larger magnitude (1.5 million bags). Corresponding quota cuts were to be scheduled as the market price fell to or below $1.15 per pound. Exporting member shares of the global quota were essentially unchanged from the 1982/83–1983/84 agreement and were to be in effect for the next two years. Countries exempt from basic quotas, generally those with quotas of less than 400,000 bags and not subject to quota cuts and increases, were authorized 4.25 percent of the initial annual global quota. Members exempt from basic quotas and exporting more than 100,000 bags were subject to quarterly quotas while those exporting 100,000 bags or less could export their entitlements at any time during the coffee year.

Futures Markets

Washed arabica coffee futures are traded on the Coffee, Sugar & Cocoa Exchange, Inc. in New York. Robusta coffee futures are traded in London.

World Coffee Supply and Distribution In Thousands of 60 Kilo Bags

Country by Time Period	Beginning Stocks	Production	Imports	Total Supply Distribution	Domestic Use	Exports				Ending Stocks
						Beans	RSTD/GRND	Soluble	Total	
1976/77	39,394	60,907	579	100,880	18,396	54,191	351	2,176	56,718	25,716
1977/78	25,716	70,850	593	97,159	18,773	47,761	185	893	48,839	29,547
1978/79	29,547	78,941	713	109,201	19,479	61,918	225	2,430	64,573	25,149
1979/80	25,149	81,861	687	107,697	19,978	58,950	219	2,572	61,741	25,978
1980/81	25,978	86,344	617	112,939	20,583	56,902	155	2,821	59,878	32,478
1981/82	32,478	98,062	702	131,242	21,222	60,416	224	4,056	64,696	45,324
1982/83	45,324	83,399	719	129,442	20,916	62,231	187	2,488	64,906	43,620
1983/84	43,620	90,359	696	134,675	21,592	64,709	267	2,837	66,813	45,270
1984/85	45,270	93,608	667	139,545	21,842	66,022	271	2,947	69,240	48,463

Note: Total may not add because of rounding. *Source: Foreign Agricultural Service, U.S.D.A.* T.117a

World Green Coffee (Total) Production In Thousands of 60 Kilo Bags (132.276 Lbs. Per Bag)

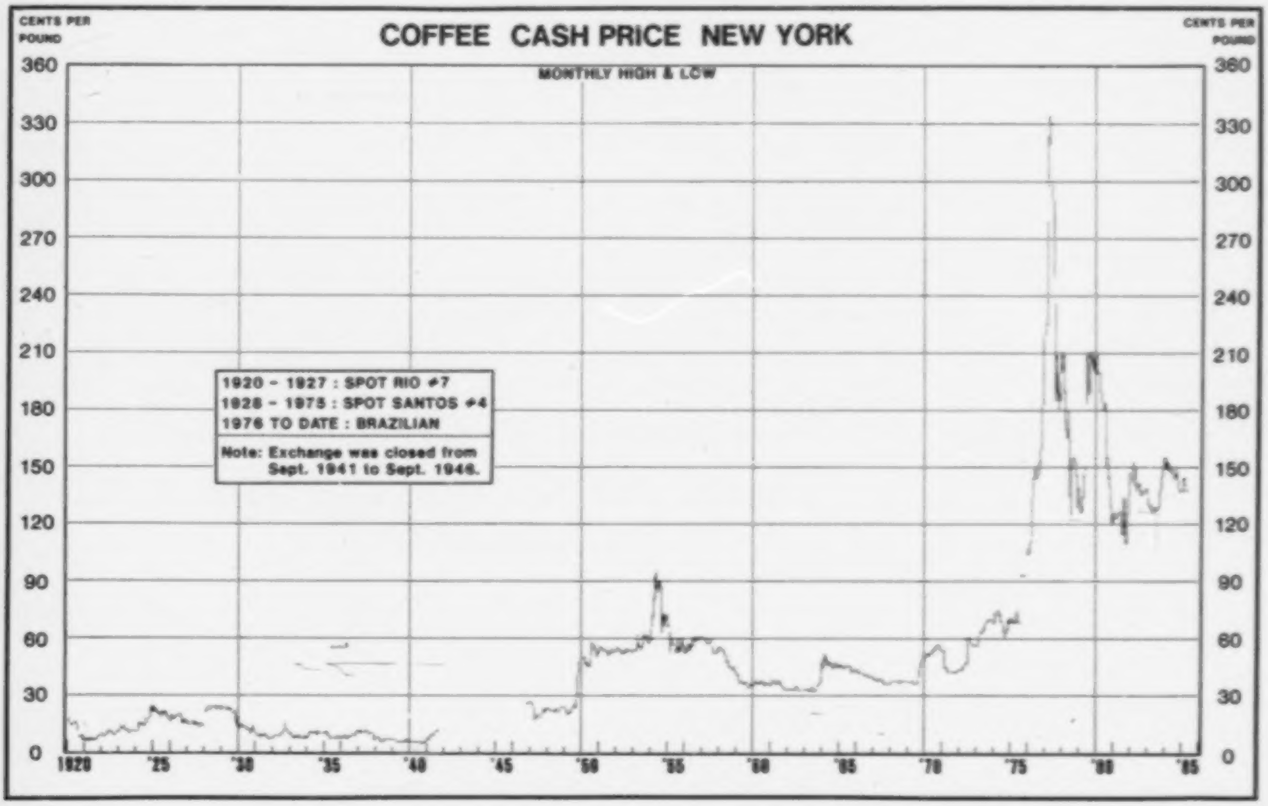
Crop Year	Angola	Brazil	Cameroon	Colombia	Costa Rica	Ethiopia	Guatemala	India	Indonesia	Ivory Coast	Mexico	Salvador	Uganda	Zaire (Congo, K)	World Total
1978–9	613	20,000	1,634	12,600	1,749	3,142	2,827	1,842	4,788	4,742	4,022	3,423	1,944	1,293	79,074
1979–0	260	22,000	1,658	12,712	1,522	3,188	2,647	2,495	4,803	3,973	3,600	3,322	2,042	1,316	81,908
1980–1	586	21,500	1,959	13,500	2,140	3,264	2,702	1,977	5,365	6,090	3,862	2,940	2,133	1,526	86,344
1981–2	392	33,000	1,953	14,342	1,782	3,212	2,653	2,540	5,785	4,160	3,900	2,386	2,885	1,425	98,062
1982–3	330	17,750	1,929	13,300	2,300	3,670	2,530	2,170	4,750	4,510	4,530	3,100	3,200	1,354	83,399
1983–4[1]	260	30,000	1,058	13,000	2,070	3,700	2,340	1,670	5,150	1,417	4,370	2,517	3,400	1,480	90,359
1984–5[1]	300	27,000	2,117	12,800	2,350	3,600	2,600	2,830	5,300	4,833	4,480	3,000	3.500	1,550	93,608

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.117

World Green Coffee (Exportable)[3] Production In Thousands of 60 Kilo Bags

Crop[2] Year	Angola	Brazil	Cameroon	Colombia	Costa Rica	Ethiopia	Guatemala	Indonesia	Ivory Coast	Kenya	Mexico	Salvador	Uganda	Zaire (Congo, K)	World Total
1978–9	568	12,000	1,606	10,970	1,533	1,432	2,517	3,738	4,677	1,181	2,915	3.226	1,905	1,123	60,028
1979–0	220	14,000	1,626	10,962	1,311	1,555	2,336	3,723	3,908	1,468	2,310	3,122	2,001	1,141	62,258
1980–1	545	13,500	1,926	11,675	1,932	1,664	2,381	4,137	6,026	1,648	2,362	2,740	2,090	1,346	66,064
1981–2	350	24,500	1,915	12,492	1,539	1,396	2,328	4,630	4,095	1,434	2,450	2,686	2,840	1,240	77,170
1982–3	287	9,750	1,904	11,445	2,077	2,040	2,195	3,636	4,445	1,501	2,830	2,900	3,154	1,169	62,707
1983–4[1]	216	21,500	1,032	11,140	1,837	2,050	2,000	4,010	1,352	2,049	2,670	2,317	3,353	1,295	69,094
1984–5[1]	255	18,500	2,092	10,935	2.115	1,935	2,260	4,100	4,763	1,000	2,780	2,300	3,452	1,350	72,032

[1] Preliminary. [2] Coffee marketing year begins in July in some countries & in others about Oct. [3] Exportable production represents total harvested production minus estimated domestic consumption. *Source: Foreign Agricultural Service, U.S.D.A.* T.118



COFFEE

Origin of Coffee Imports (for Consumption) into the U.S. In Thousands of 60 Kilo Bags

Year	Angola	Brazil	Colombia	Costa-Rica	Domin. Repub.	Ecuador	Ethi-opia	Guate-mala	Indon-esia	Ivory Coast	Mexico	Peru	Phil-ippines	Salva-dor	Vene-zuela	Grand Total
1971	1,590	6,536	2,642	350	338	404	1,130	813			1,286			645	246	22,686
1972	1,297	6,152	2,711	294	401	490	965	689	744	977	1,070			391	243	20,769
1973	1,693	4,596	2,868	284	507	435	1,062	1,110	626	1,150	1,641			1,047	174	21,789
1974	2,396	2,725	3,090	268	381	512	505	1,096	942	749	1,324			1,111	246	19,245
1975	1,202	3,748	3,400	192	336	694	533	874	765	966	1,662	432		1,018	182	20,289
1976	871	3,092	2,688	179	551	767	703	749	1,082	1,330	1,869	461	44	1,045	288	19,788
1977	49	2,453	1,951	272	585	505	288	832	860	673	1,406	654	6	1,037	155	14,808
1978	304	2,694	2,808	334	461	1,044	461	942	1,177	775	1,390	954	62	627	239	18,133
1979	40	1,890	3,891	516	548	638	549	1,123	1,294	834	1,934	565	96	1,123	121	19,396
1980	120	3,505	3,404	298	343	539	406	1,374	1,315	438	1,337	573	179	1,374	35	18,153
1981	21	3,243	1,727	226	359	701	547	645	1,516	602	1,393	439	270	779	27	16,555
1982	63	3,372	1,710	248	500	773	578	844	1,118	998	1,377	513	308	919	16	17,416
1983	27	3,417	1,755	226	430	857	519	887	1,079	674	1,495	439	276	1,214	26	16,449
1984[1]	5	3,866	2,170	256	447	961	423	1,118	1,030	1,144	1,553	557	296	1,052	88	17,734
1985																

[1] Preliminary. *Source: U.S. Department of Commerce*

T.122

Total Coffee Imports (for Consumption) into the U.S. In Thousands of 60 Kilo Bags

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	2,002	1,530	1,480	2,032	1,759	1,941	2,132	2,720	2,754	621	875	1,818	21,669
1972	2,547	2,172	1,137	1,146	1,784	1,452	1,434	1,947	2,149	2,057	1,643	1,288	20,757
1973	1,996	1,844	2,101	2,050	2,494	1,710	1,573	1,731	1,399	1,624	1,624	1,652	21,799
1974	2,182	2,022	2,457	2,264	1,873	1,529	1,499	1,152	821	740	1,159	1,550	19,248
1975	1,852	1,656	1,535	1,448	1,365	1,736	1,626	1,868	2,533	1,784	1,587	1,299	20,289
1976	1,664	1,744	2,311	1,636	1,546	1,864	1,909	1,637	956	1,013	1,649	1,858	19,788
1977	1,994	1,707	1,839	1,824	1,224	1,137	756	695	678	635	972	1,347	14,808
1978	1,682	1,575	1,707	1,557	1,345	1,249	1,316	1,124	1,337	1,901	1,689	1,651	18,133
1979	1,747	1,353	1,631	2,037	1,619	1,617	1,597	1,404	1,632	1,273	1,593	1,893	19,396
1980	2,020	1,366	1,421	1,642	1,566	1,663	1,533	1,386	1,062	1,292	1,386	1,715	18,153
1981	1,858	1,738	1,395	1,299	1,356	1,026	922	1,213	1,150	1,487	1,565	1,547	16,555
1982	1,287	1,195	1,490	1,147	1,476	1,335	1,282	1,602	1,640	2,005	1,356	1,602	17,416
1983	1,556	1,332	1,373	1,253	1,502	1,034	1,319	1,230	1,532	1,685	1,380	1,253	16,449
1984	1,598	1,299	1,440	1,905	1,615	1,059	1,722	1,735	1,432	1,614	1,127	1,187	17,734
1985	1,622												

Source: U.S. Dept. of Commerce

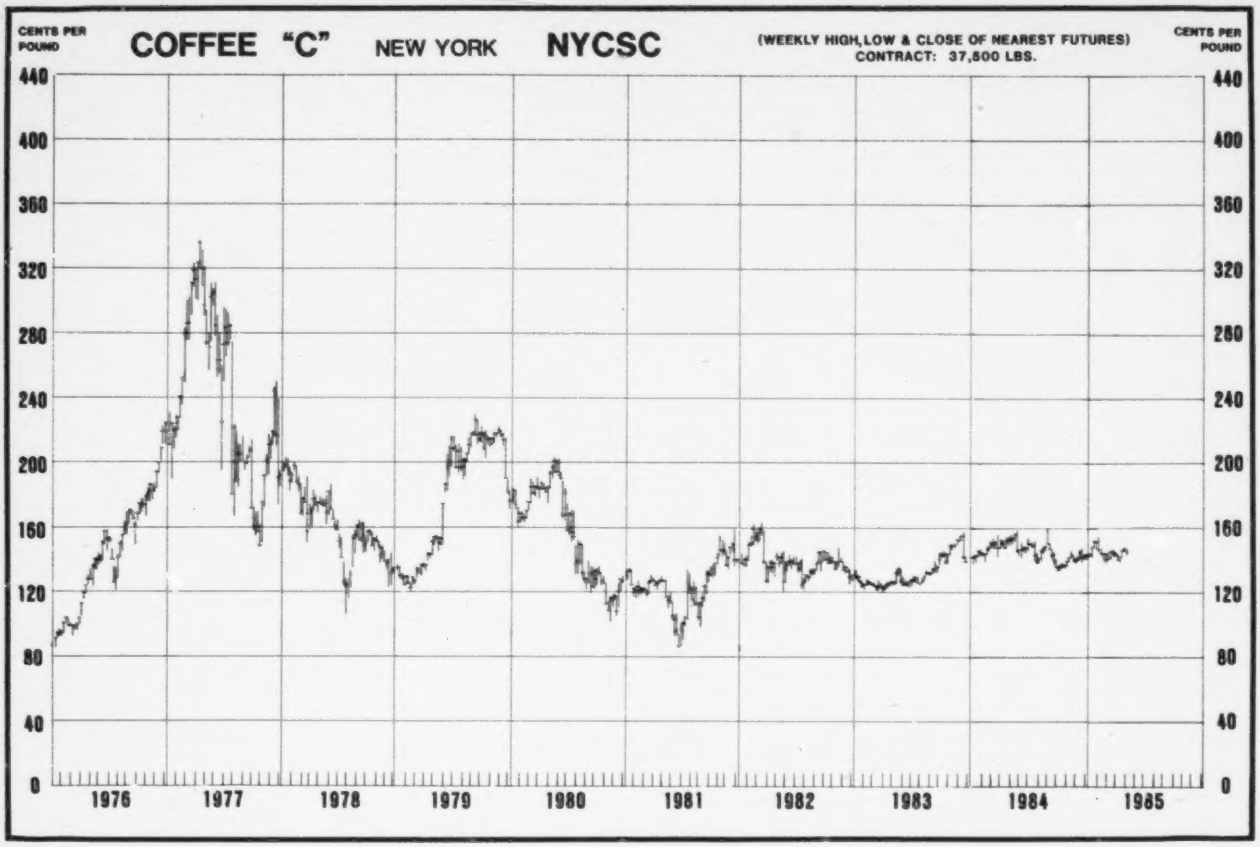
T.121

Average Spot Price of Coffee (Santos No. 4) in N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	55.0	55.0	48.0	45.0	43.8	43.8	43.0	43.3	43.3	43.3	44.0	44.0	46.1
1972	N.A.	N.A.	N.A.	46.3	48.0	48.5	N.A.	62.5	59.0	48.0	56.0	57.0	54.4
1973	57.0	62.0	65.5	65.0	65.0	67.0	70.0	70.0	72.5	72.3	73.0	72.0	67.6
1974	72.0	71.0	75.0	75.5	76.5	74.0	72.0	63.0	60.0	64.0	69.0	70.0	70.2
1975	67.5	68.0					No Quotations						67.8
1976		No Quote			93.5		No Quote		152.0		No Quote		122.8
1977							No Quote						
1978				No Quote				135.0	154.0	154.0	153.0	146.0	148.4
1979	146.0	127.0	136.0	138.0	148.0	180.0	209.0	201.0	206.0	208.0	205.0	212.0	176.3
1980	189.0	213.0	205.0	208.0	218.0	211.0	195.0	206.0	206.0	210.0	210.0	208.0	206.6
1981	218.0	218.0	218.0	218.0	129.0	115.5	115.5	127.0	127.0	129.5	147.0	150.0	159.4
1982	151.0	136.0	136.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	133.0	133.0	142.0
1983	133.0	133.0	133.0	141.5	141.5	141.5	141.5	143.0	143.0	143.0	143.0	143.0	140.0
1984	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0
1985													

Source: Bureau of Labor Statistics (0191-0101.01)

T.120

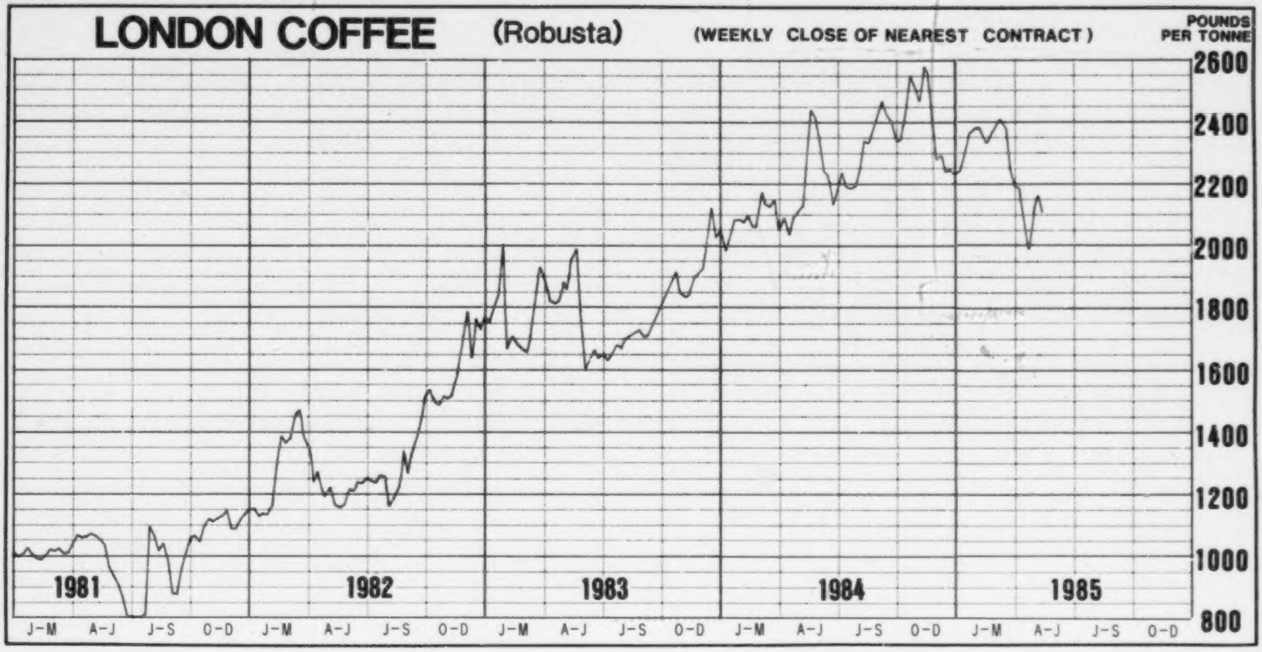


High, Low & Closing Prices of May Coffee Futures in New York In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year				Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1980	High	145.00	154.86	155.00	216.49	216.35	197.00	200.00	204.75	198.00	191.50	184.00	183.50	194.75	188.00	199.00	216.49
	Low	126.49	140.50	144.05	157.00	178.29	179.25	190.35	183.50	187.00	175.00	166.91	165.50	180.75	176.50	174.75	116.00
	Close	144.99	153.50	153.00	216.49	183.90	195.09	197.25	189.31	194.08	175.96	171.00	183.26	182.25	176.60	195.25	—
1981	High	190.75	187.50	198.00	198.60	181.40	162.00	157.00	138.00	128.50	130.40	137.00	127.00	131.40	129.25	127.90	198.60
	Low	176.25	176.10	177.40	169.00	138.47	135.25	129.75	128.25	114.75	116.00	123.30	115.55	117.65	121.50	113.00	113.00
	Close	179.69	178.54	190.60	179.75	146.59	143.78	134.65	128.55	123.25	127.81	127.25	121.00	128.66	126.48	113.00	—
1982	High	126.25	124.00	123.87	111.00	126.75	120.25	123.50	130.25	138.00	133.80	137.88	147.30	149.00	143.75	144.95	149.00
	Low	120.10	117.50	111.50	80.50	81.25	98.28	96.10	123.00	124.25	122.23	128.75	137.25	124.50	129.20	135.10	80.50
	Close	122.60	122.25	112.50	87.50	121.45	98.28	123.00	129.00	126.23	133.63	137.88	141.26	128.56	141.72	138.25	—
1983	High	116.50	118.50	117.50	121.25	117.50	114.00	131.00	131.15	135.40	132.30	127.90	123.95	126.90	126.85	135.17	135.40
	Low	114.00	107.50	109.25	113.50	103.51	107.50	111.00	124.00	126.25	121.60	120.25	118.90	120.35	120.10	124.55	103.51
	Close	114.76	113.00	118.51	118.28	108.25	113.10	129.45	130.49	131.78	125.00	120.60	120.12	123.23	124.80	134.17	—
1984	High	117.00	117.75	126.00	124.50	124.00	127.25	130.05	137.30	139.90	144.10	139.65	145.00	152.30	154.23	158.50	158.50
	Low	109.50	113.00	116.00	121.50	121.60	122.25	125.25	129.30	134.50	134.30	134.25	132.75	141.90	147.00	147.80	108.50
	Close	115.13	116.75	123.38	122.51	122.26	125.80	129.25	135.50	138.78	135.94	137.05	144.84	151.37	152.20	154.00	—
1985	High	131.50	138.50	152.00	146.28	140.15	146.00	143.15	135.35	139.15	140.25	147.90	150.70	146.05			
	Low	125.28	130.00	137.50	137.75	132.90	133.25	132.75	131.31	134.50	135.60	138.65	139.85	139.25			
	Close	131.38	138.50	142.25	137.76	133.48	144.15	133.80	135.05	135.72	140.25	147.24	139.96	143.00			
1986	High	142.50															
	Low	136.59															
	Close	141.50															

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc.

T.125



Month End Open Interest of Coffee Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	4,413	4,191	3,942	3,661	3,733	2,952	3,152	3,926	4,004	4,767	5,951	6,581
1979	7,113	7,965	8,799	9,751	10,279	8,761	10,214	12,014	12,479	14,808	15,974	15,988
1980	13,077	13,113	12,990	11,288	16,975	15,854	13,576	10,767	11,824	11,155	9,489	8,848
1981	8,218	8,624	9,931	10,043	8,969	8,093	9,182	8,182	9,223	9,084	8,922	9,823
1982	11,236	9,647	9,249	8,753	7,949	8,358	7,791	8,393	9,677	8,876	9,152	9,273
1983	10,752	10,336	11,739	11,752	11,317	7,885	8,042	9,351	9,439	9,420	8,600	7,706
1984	8,086	10,963	13,012	11,649	9,841	9,437	10,303	10,405	10,300	10,400	10,143	12,431
1985	14,435	12,454	13,300									
1986												

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc. T.124

Volume of Trading of Coffee "C" Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	11,125	10,341	17,202	12,049	12,194	11,112	11,346	18,526	13,526	14,615	14,589	17,334	163,959
1979	21,463	25,243	24,205	36,298	35,885	39,137	43,944	43,046	40,088	50,054	51,949	38,488	449,799
1980	70,277	77,143	112,558	93,108	145,830	87,149	80,217	66,054	69,731	37,528	35,310	32,029	906,944
1981	38,671	34,086	44,963	29,766	39,384	46,094	50,759	50,482	44,368	44,235	49,468	41,757	515,302
1982	47,560	50,976	63,168	52,708	51,062	44,428	42,779	38,457	44,583	39,967	46,247	37,500	556,435
1983	30,567	32,884	44,211	37,399	44,917	45,575	26,065	32,818	22,579	38,999	34,428	36,999	427,441
1984	33,327	44,890	46,793	46,833	51,174	42,891	34,956	48,979	43,159	29,703	37,457	36,094	499,133
1985	48,733	54,809											
1986													

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc. T.123

Coke

U.S. Salient Statistics of Coke In Thousands of Short Tons

Year	Production[2]	Domestic Consumption	Producers' Stocks—Jan. 1 Total	Producers' Stocks—Jan. 1 Oven Coke at Plants Merchant	Producers' Stocks—Jan. 1 Oven Coke at Plants Furnace	Producers' Stocks—Jan. 1 Petroleum Coke	Exports	Imports	Exports to Canada	Exports to Mexico	Bel./Lux.	Netherlands	Korea Rep.	Turkey	Venezuela	Avg. Price of Coke Exports $ SH. Ton
1976	58,333	56,834	4,996	278	4,718	1,472	1,315	1,311	754.4	87.7						
1977	53,509	54,144	6,487	314	6,173	2,127	1,241	1,829	634.9	49.4						
1978	49,009	56,948	6,444	136	6,308	2,050	693	5,722	299	37.4						
1979	52,943	53,826	3,534	184	3,350	2,214	1,440	3,974	598	61.0						
1980	46,132	41,278	5,185	595	4,590	1,042	2,071	659	812	75.0						
1981	42,786	44,046	8,627	1,106	7,521	846	1,170	527								
1982[1]	28,115	25,776	6,724	403	6,324	900	993	120	449.7	72.0	99.3	132.7	4.5	—	40.1	61.81
1983[3]	25,808	29,850	8,190	331	7,858	1,344	665	35	471.2	55.8	24.7	24.0	—	—	7.0	68.53
1984[3]	31,000	30,000	3,518	286	3,233	1,096	1,045	582	477.0	72.8	106.4	150.2	64.8	80.1	65.8	66.48
1985[3]			3,500	300	3,200	1,000										

[1] Preliminary. [2] Beehive and oven, coke & breeze. [3] Estimate. *Source: Bureau of Mines*

T.127

Oven Coke Production in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	4,551	4,372	5,041	4,884	5,069	4,938	5,007	4,785	4,720	4,857	4,752	4,751	57,728
1977	4,412	4,267	4,696	4,666	4,822	4,686	4,639	4,249	4,069	4,289	4,186	4,077	53,060
1978	3,603	2,741	2,661	3,753	4,398	4,362	4,455	4,379	4,346	4,512	4,383	4,645	48,238
1979	4,469	4,031	4,679	4,419	4,585	4,352	4,414	4,440	4,366	4,466	4,252	4,453	52,943
1980	4,394	4,204	4,444	4,396	4,238	3,686	3,370	3,387	3,295	3,470	3,565	3,683	46,132
1981		11,178			9,853			11,175			10,580		42,786
1982		8,828			7,507			6,270			5,509		28,115
1983[1]		5,579			6,451			6,753			7,025		25,808
1984[1]		7,696			8,227			7,522					

[1] Preliminary. *Source: Bureau of Mines*

T.128

Coke (Oven-Coke) Stocks at Plants In Thousands of Short Tons

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1976	4,996	5,092	4,994	5,105	5,062	4,992	4,729	4,641	4,445	4,750	5,179	5,800
1977	6,487	6,950	7,231	7,283	7,038	6,736	6,468	6,516	6,281	6,192	6,554	6,526
1978	6,444	5,937	5,209	3,460	3,189	2,993	2,964	2,845	2,989	3,065	3,131	3,339
1979	3,534	3,548	3,509	3,339	3,495	3,459	3,200	3,253	3,322	3,754	4,228	4,630
1980	5,185	5,531	5,781	5,832	6,063	6,698	7,426	8,133	8,676	9,018	9,011	9,040
1981	8,267	—	—	7,586	—	—	4,990	—	—	5,198	—	—
1982	6,724	—	—	7,455	—	—	7,871	—	—	7,969	—	—
1983[1]	8,190	—	—	5,781	—	—	4,569	—	—	3,875		
1984[1]	3,518	—	—	3,153	—	—	2,966	—	—	3,441		

[1] Preliminary. *Source: Bureau of Mines*

T.131

Index of Wholesale Price[1] of Oven Foundry Coke F.O.B. at Birmingham, Ala. Base Per Ton 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00
1977	123.00	123.00	123.00	123.00	129.00	129.00	129.00	129.00	129.00	129.00	129.00	129.00	127.00
1978	134.00	134.00	134.00	134.00	139.75	139.75	139.75	139.75	139.75	139.75	139.75	139.75	137.83
1979	144.75	144.75	144.75	N.A.	N.A.	N.A.	N.A.	144.75	144.75	146.65	146.65	145.46	145.46
1980[1]	439.6	439.6	439.6	439.6	439.6	439.6	439.6	439.6	439.6	439.6	439.6	434.0	439.1
1981	434.0	434.0	434.0	434.0	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	463.9
1982	478.9	485.2	485.2	N.A.	485.2	454.8	467.4	465.9	465.7	463.4	463.4	463.4	470.8
1983	460.5	460.5	452.7	452.7	433.6	433.6	426.8	448.9	448.9	448.1	448.8	410.7	443.8
1984	413.6	433.0	434.1	437.8	436.6	437.2	437.0	432.4	430.8	427.6	428.0	430.1	431.5
1985	434.8												

[1] Prior to 1980, data are for the price of oven foundry coke, F.O.B. at Birmingham, Ala. in dollars per net ton. *Source: Bureau of Labor Statistics*
(0522-0101.99)

T.130

Copper

Total domestic consumption of refined copper surged about 18 percent in 1984 to 2.3 million tons from about 1.9 million tons in 1983 and was up almost 26 percent from the depressed levels of 1982. In spite of this significant increase in demand, domestic producers were forced to cut back production because of extremely low prices and a high level of imports. The sustained strength of the U.S. dollar in international currency markets and devaluations by other copper producing countries placed U.S. producers at a disadvantage in the domestic and international markets.

The world oversupply of copper coupled with the significant increase in U.S. demand caused foreign producers to aggressively seek an outlet in the U.S. Refined imports rose about 3 percent during 1984 to a record level of about 520,000 tons. The rise in imports was significant because it occurred at a time when domestic producers had charged that the 1983 import level of 507,000 tons had caused them serious injury and had therefore sought import relief. During the first 6 months of 1984, imports from Chile declined 55 percent compared to the same 1983 period. Imports from other countries, however, increased during those first six months. Imports from Canada were up 48 percent; Peru, up 73 percent; Zaire, up 6 percent; and Zambia, up 112 percent. Exports of refined copper increased during 1984 to about 120,000 tons, up 33 percent from the previous year. The increase in exports resulted largely from deliveries against the LME-Comex arbitrage rather than from a fundamental expansion of overseas markets.

Imports of copper and brass mill products increased dramatically during 1984. Unalloyed product imports surged 53 percent during the first 6 months as compared to the same period in 1983, while alloyed imports rose 55 percent. The largest contributors to the increase were Canada, up 63 percent, and the EC countries, up 64 percent. Exports of copper and brass mill products were insignificant and were hampered by the strength of the U.S. dollar.

In January 1984, eleven U.S. producers petitioned the U.S. International Trade Commission (ITC) for relief from imports under Section 201 of the Trade Act. The domestic producers contended that imports were causing them injury and requested that import quotas be imposed. The petition, on which the ITC held public hearings in May 1984, was opposed by foreign producers and strongly opposed by domestic copper fabricators. These fabricators feared that any relief granted to the producing industry would create a differential between the U.S. and the world copper prices, thus placing their products at a competitive disadvantage to imports. On July 16, the ITC found, by a 5–0 vote, that imports were a cause of serious injury to the domestic producers. The ITC, however, could not agree on a remedy. In early September, the President decided not to grant relief to the copper industry.

Total 1985 refined copper production in the U.S. was expected to remain at about the 1984 level of 1.7 million tons, and the production of primary refined copper was expected to decrease by 7 percent in 1985. Imports were expected to increase dramatically during 1985 to a record level of about 620,000 tons, up 19 percent from 1984. Exports of refined copper in 1985 were expected to be insignificant.

Futures Markets

Copper futures are traded on the Commodity Exchange, Inc. (Comex) in New York, and on the London Metal Exchange (LME).

World Mine Production of Copper (Content of Ore) In Thousands of Metric Tons

Year	Australia	Canada[3]	Chile	China	Finland	Japan	Mexico	Peru	Zambia	Poland	Zaire	South Africa	Philippines	United States[3]	USSR[4]	World Total[1]
1979	237.6	636.4	1,063	200	41.1	59.1	107.1	390.7	588.3	325.0	430.4	190.6	298.3	1,444	855	7,691
1980	243.5	716.4	1,068	200	36.9	52.6	175.4	366.8	595.8	346.1	539.5	200.7	304.5	1,181	900	7,739
1981	231.3	691.3	1,081	200	38.5	51.5	230.5	342.1	588.0	294.0	555.1	208.7	302.3	1,538	940	8,191
1982	245.3	612.4	1,241	200	34.8	50.7	239.1	369.4	567.8	376.0	519.0	188.7	292.1	1,147	970	8,072
1983[2]	256.0	625.0	1,257	200	35.0	46.0	250.0	335.6	542.8	380.0	535.0	210.8	273.0	1,038	1,000	8,044
1984[1]	250	625	1,250					370	540	380	525		250	1,087	1,000	8,120

[1] Estimate. [2] Preliminary. [3] Recoverable. [4] Smelter Production. *Source: Bureau of Mines* T.132

Commodity Exchange Inc. (COMEX) Warehouse Stocks of Copper In Thousands of Short Tons

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1979	179.2	170.8	156.4	133.6	118.3	89.9	70.7	61.5	56.8	57.0	64.9	71.3
1980	107.8	114.1	132.0	145.7	149.8	155.5	167.3	181.7	190.8	185.4	178.6	170.9
1981	179.6	179.3	179.8	173.3	182.4	175.5	170.6	168.8	167.5	171.6	173.1	171.4
1982	187.6	189.3	193.6	195.7	198.5	201.5	202.2	207.4	211.8	207.1	210.3	246.3
1983	274.4	278.5	293.6	306.1	325.9	336.5	347.4	360.1	374.5	389.3	396.1	404.2
1984	409.2	417.7	409.9	403.2	392.3	372.5	361.6	335.6	320.6	310.8	300.7	288.1
1985	276.3	258.2	238.8	224.8								

Source: Commodity Exchange, Inc. N.Y. (COMEX) T.144

U.S. Salient Statistics of Copper In Thousands of Metric Tons

	New Copper Produced						Imports[3]		Exports		Stocks—Dec. 31			Appar. Consumption[6]	
	From Domestic Ores														
Year	Mines	Smelters	Refineries	From Foreign Ores[2]	Total New	Secondary Recovered[7]	Unmanufactured	Refined	Ore, Concentrate[4]	Refined[5]	N.Y. Commodity Exch.	Primary Producers (Refined)	Blister & Materials in Solution	Primary Copper	Primary & Old Copper[8]
1975	1,282	1,247	1,167	143	1,309	335	294	133	305	156	91	187	283	1,191	1,526
1976	1,457	1,326	1,291	106	1,396	380	485	346	218	102	182	172	291	1,656	2,036
1977	1,364	1,265	1,280	77	1,357	410	396	351	91	47	167	212	314	1,622	2,032
1978	1,358	1,270	1,327	122	1,449	502	532	403	187	92	163	153	263	1,819	2,321
1979	1,447	1,313	1,413	104	1,517	604	282	204	231	74	90	64	275	1,735	2,432
1980	1,181	994	1,126	89	1,215	613	547	427	107	14	163	49	272	1,638	2,175
1981	1,538	1,295	1,430	114	1,544	598	430	331	151	24	170	151	277	1,748	2,278
1982[1]	1,147	941	1,065	162	1,227	518	506	258	195	31	248	268	233	1,324	1,760
1983[1]	1,038	888	1,004	178	1,182	455	644	460	50	81	371	154	174	1,688	2,020
1984[1]	1,087	990	1,086	115	1,201	450	540	445	69	91	251	122	232		2,151

[1] Preliminary. [2] Also from matte, etc., refinery reports. [3] For consumption. [4] Blister (copper content)." [5] Ingots, bars, etc. [6] Withdrawals from total supply on domestic account. [7] From old scrap only. [8] Old scrap only. *Source: Bureau of Mines*

T.133

Consumption of Refined Copper[2] in the United States In Thousands of Metric[4] Tons

	By-Products						By Class of Consumer						
Year	Cathodes	Wire Bars	Ingot & Ingot Bars	Cakes & Slabs	Billets	Other	Wire Mills	Brass Mills	Chemical Plants	Secondary Smelters	Foundries	Miscellaneous	Total Consumption
1975	527.9	722.8	72.5	97.7	75.7	4.1	1,061.3	439.0	.5	4.5	14.0	15.3	1,534.5
1976	846.0	768.0	93.5	123.8	84.0	8.6	1,346.0	574.9	.5	3.1	15.4	19.7	1,991.9
1977	965.5	861.3	90.2	115.0	103.3	11.2	1,511.2	628.6	N.A.	6.6	N.A.	N.A.	2,185.0
1978[4]	1,026.1	794.7	111.9	117.1	114.6	24.9	1,517.4	619.2	.4	7.5	12.4	32.3	2,189.3
1979	1,099.0	701.9	92.1	105.6	129.5	30.4	1,499.6	610.2	.4	6.3	11.9	30.1	2,158.4
1980	960.2	583.0	67.6	84.3	117.4	49.7	1,308.9	511.6	.3	5.0	10.9	25.3	1,862.1
1981	1,198.9	489.2	66.7	121.8	101.9	46.7	1,449.6	536.2	.4	5.4	11.3	22.2	2,025.2
1982	1,211.0	195.1	45.1	92.4	82.2	32.4	1,232.8	393.2	.4	4.4	7.6	19.7	1,658.1
1983[1]	1,448.1	41.4	53.2	115.3	101.8	7.7	1,233.9	500.3	.6	3.2	11.3	18.3	1,767.5
1984[3]							1,416.3	578.1		2.6			2,027.0

[1] Preliminary. [2] Primary & secondary. [3] Estimate. [4] Data prior to 1978 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

T.134

U.S. Mine Production of Recoverable Copper, by Selected States In Thousands of Metric Tons

Year	Arizona	California	Colorado	Idaho	Michigan	Missouri	Montana	Nevada	New Mexico	Pennsylvania	Tennessee	Utah	Maine	Other States[2]	Grand Total
1976	929.3	.3	2.2	3.1	39.7	10.0	82.7	52.8	156.4	—	10.1	168.2	1.6	.2	1,456.6
1977	838.0	.2	1.7	3.7	38.4	10.6	78.2	60.8	149.4	—	5.6	176.1	1.2	.3	1,304.4
1978	891.4	N.A.	1.2	3.9	N.A.	10.8	67.3	20.5	127.8	—	11.3	186.3	—	37.1	1,357.6
1979	949.0	N.A.	.4	3.6	N.A.	13.0	69.9	N.A.	164.3	—	N.A.	193.1	—	53.3	1,446.6
1980	770.1	N.A.	.5	3.1	N.A.	13.6	37.7	N.A.	149.4	—	N.A.	157.8	—	48.9	1,181.1
1981	1,040.8	N.A.	N.A.	4.2	N.A.	8.4	62.5	N.A.	154.1	—	N.A.	211.3	—	56.8	1,538.2
1982	769.5	N.A.	.6	3.1	N.A.	7.9	65.0	N.A.	N.A.	—	N.A.	189.1	—	111.8	1,147.0
1983	678.2	N.A.	N.A.	3.6	—	7.7	33.3	N.A.	N.A.	—	N.A.	169.8	—	145.5	1,038.1
1984[1]	748.0			3.7			17.7							317.6	1,087.0

[1] Preliminary. [2] Also includes N.A. States. *Source: Bureau of Mines*

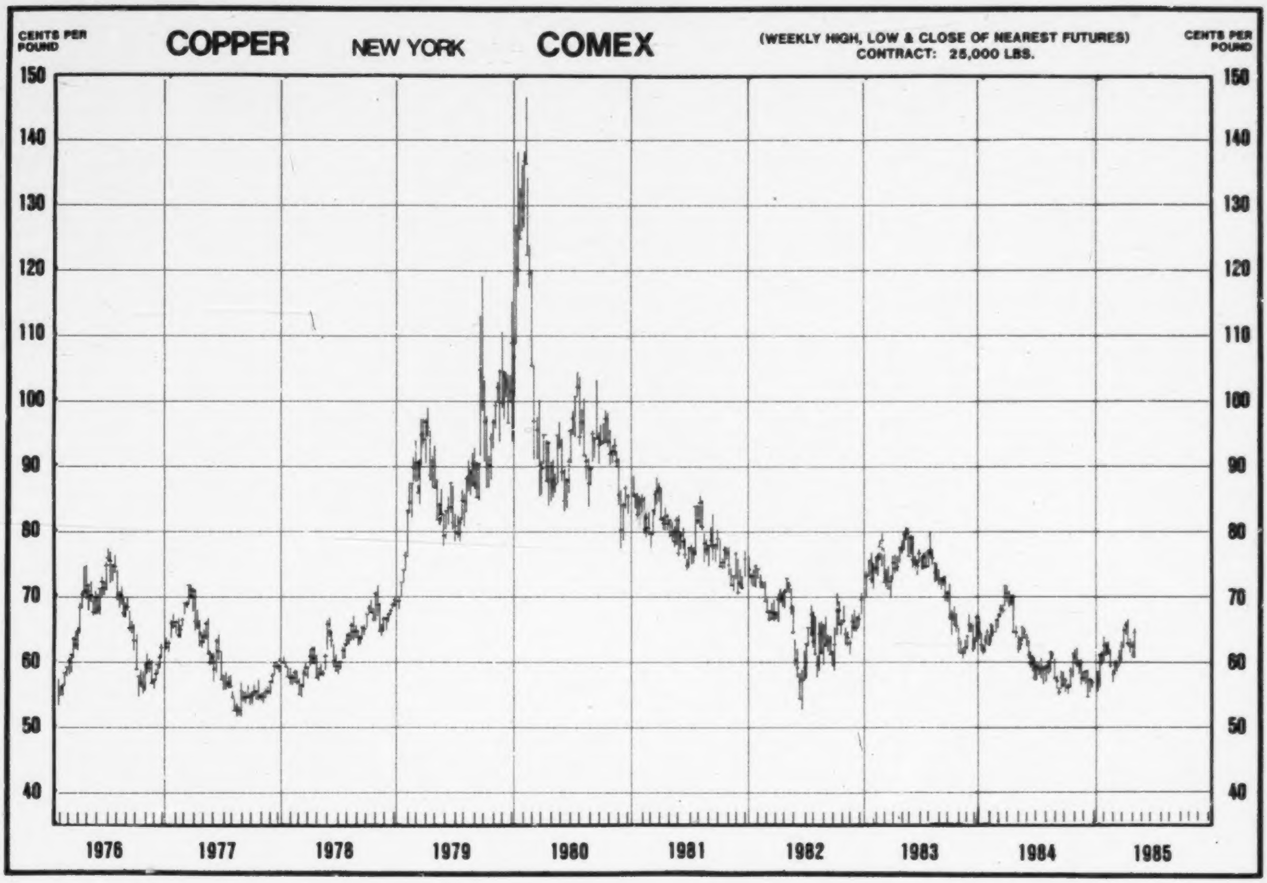
T.135

Dealers' Buying Price of No. 2 Heavy Copper Scrap at N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	36.98	37.92	39.76	41.95	44.10	43.66	46.93	45.73	43.71	38.48	35.00	34.10	40.69
1977	34.00	35.73	41.50	40.63	39.62	35.91	35.00	34.04	33.00	33.00	33.00	33.00	34.23
1978	34.00	35.61	35.59	39.73	39.18	41.77	40.50	41.89	42.50	44.70	45.40	44.75	40.47
1979	47.07	58.82	65.46	68.93	63.14	59.05	57.79	58.85	62.03	62.89	62.25	65.00	60.94
1980	74.91	82.35	70.30	60.18	57.60	56.50	65.36	64.88	64.21	65.37	66.08	58.36	65.51
1981	57.60	55.50	57.14	59.50	58.20	55.32	52.68	53.50	53.00	50.16	48.08	46.00	53.89
1982	45.50	45.50	43.76	41.50	41.40	37.82	36.07	37.82	37.50	37.50	38.90	39.50	40.23
1983	42.55	46.71	51.50	51.50	53.74	54.50	54.50	53.54	51.74	48.12	43.30	42.50	49.52
1984	41.17	40.60	43.59	44.50	43.30	42.21	39.36	38.50	38.08	36.20	34.50	35.67	39.81
1985	37.50	37.50	37.50										

Source: American Metal Market

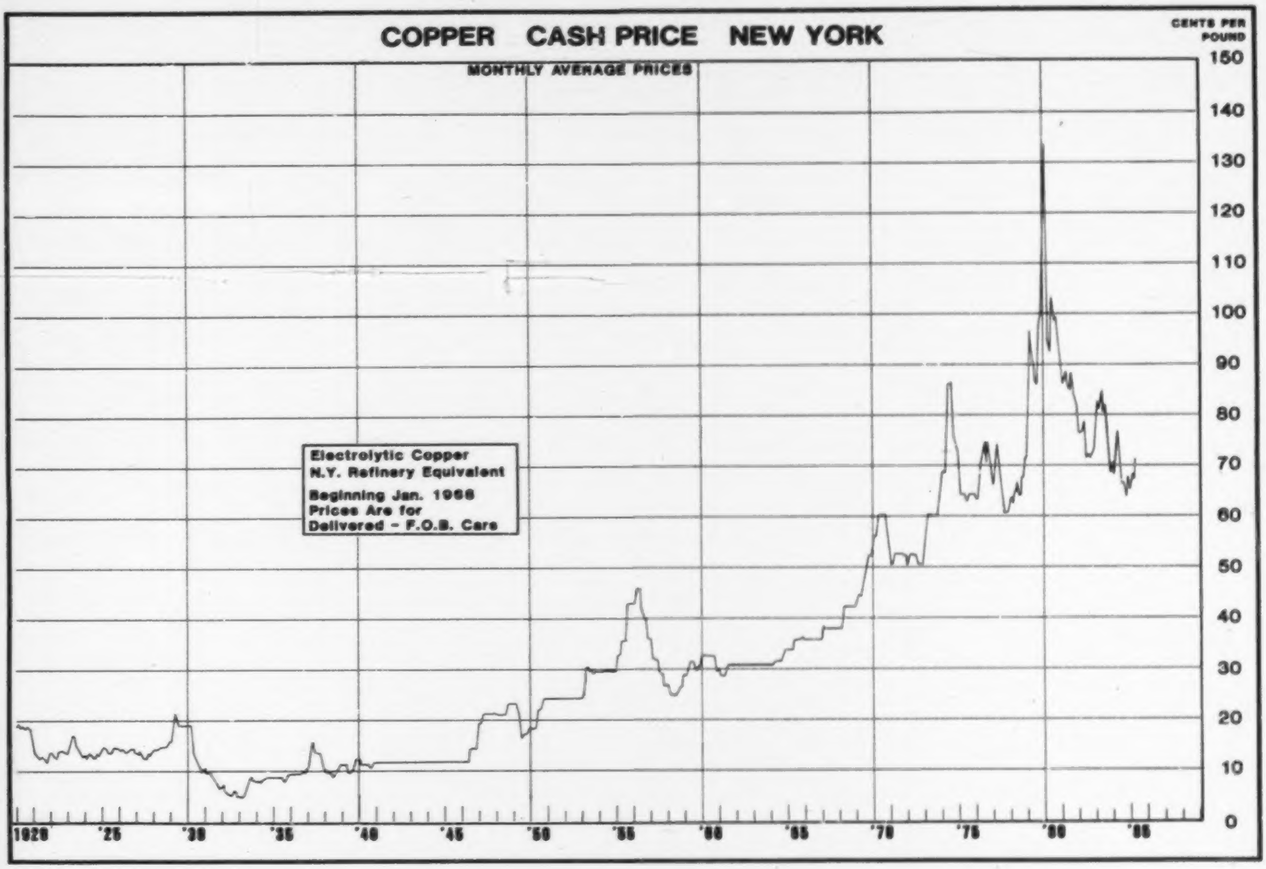
T.140



High, Low & Closing Prices of May Copper Futures on the Commodity Exch., Inc., N.Y. (COMEX) ¢ Lb.

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1980	High	97.60	97.50	93.10	87.85	87.35	94.50	111.90	117.05	102.50	106.50	140.80	148.40	123.30	94.90	95.50	148.40
	Low	86.70	88.70	81.90	82.00	79.75	83.70	87.20	87.50	91.50	95.00	104.20	121.00	85.20	83.80	84.80	79.75
	Close	94.85	93.10	82.95	82.75	82.80	93.40	105.80	92.60	102.50	104.75	131.60	123.00	87.10	87.90	94.60	—
1981	High	135.00	105.50	101.90	100.00	107.70	103.90	106.80	102.00	100.00	96.80	94.20	87.95	88.30	87.40	81.85	153.00
	Low	98.40	93.60	94.00	90.40	97.20	92.00	94.00	97.20	94.90	82.30	84.75	81.80	79.30	80.10	77.50	77.50
	Close	99.20	100.50	98.40	97.80	99.00	94.35	97.30	98.10	96.20	89.20	87.00	82.55	86.40	81.15	77.85	—
1982	High	100.00	99.65	96.00	94.10	92.80	95.50	87.40	84.90	81.70	80.50	77.70	76.25	71.75	71.25	72.90	115.20
	Low	92.80	94.00	91.35	86.70	85.20	85.80	79.80	79.40	74.85	74.00	73.00	71.10	66.70	66.10	66.65	66.10
	Close	98.85	95.20	93.20	86.80	93.10	87.45	82.10	81.65	77.35	77.30	76.35	71.15	67.55	70.70	66.70	—
1983	High	82.25	81.20	82.70	71.30	75.60	72.00	71.90	71.50	70.85	72.65	77.95	81.45	78.40	78.70	80.90	108.30
	Low	77.00	76.80	73.00	60.80	65.35	63.25	62.40	62.00	64.30	67.00	71.00	75.00	70.80	73.80	76.70	62.00
	Close	78.00	80.70	72.60	67.60	68.65	67.20	62.95	67.95	68.90	70.70	76.60	75.20	75.15	77.40	78.05	—
1984	High	85.40	86.00	87.60	83.80	85.05	83.00	78.95	71.70	70.65	69.40	68.10	67.30	71.80	71.75	65.65	88.60
	Low	78.05	81.70	83.70	80.25	80.60	77.30	69.80	64.90	64.00	64.60	62.50	63.90	65.60	63.90	61.40	61.40
	Close	82.60	84.30	84.80	81.25	82.45	77.60	70.25	66.10	69.15	68.30	65.70	66.10	71.75	64.45	64.55	—
1985	High	71.80	79.10	73.35	71.75	67.10	66.60	65.15	62.75	62.70	60.90	64.40	64.20	63.15			
	Low	65.60	72.00	69.10	65.35	61.80	62.00	58.90	58.45	59.05	56.40	56.20	57.95	59.10			
	Close	71.75	72.40	70.95	67.35	61.90	66.05	60.55	62.75	59.85	57.85	63.15	59.60	62.60			
1986	High	65.65															
	Low	62.80															
	Close	65.65															

Source: Commodity Exchange, Inc. of N.Y. (COMEX) T.141



Producers' Prices of Electrolytic (Wirebar) Copper, Delivered U.S. Destinations In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	63.63	63.63	64.73	69.26	70.63	70.63	74.63	74.63	74.63	72.34	70.63	66.10	69.62
1977	66.13	68.63	72.54	74.41	72.77	70.13	68.10	63.89	60.63	60.63	60.63	62.11	66.72
1978	63.63	63.59	62.35	64.63	64.90	66.78	63.99	67.34	67.63	70.13	71.68	71.73	66.53
1979	76.15	89.41	94.65	98.66	91.04	87.66	86.02	89.94	95.07	98.84	98.44	106.08	92.75
1980	118.05	133.83	106.23	94.61	93.16	92.39	103.10	100.60	98.73	99.41	96.98	89.20	102.19
1981	88.64	86.07	87.32	88.44	86.33	85.68	84.71	87.98	85.63	83.28	82.09	80.94	85.59
1982	79.42	79.35	76.45	76.99	78.78	71.43	71.78	71.83	71.37	71.92	72.28	73.17	74.56
1983	79.03	82.72	81.09	82.44	84.80	80.90	81.81	79.80	76.75	71.58	68.64	70.43	78.33
1984	68.08	69.95	74.18	76.58	71.56	69.19	66.34	66.44	65.39	63.92	67.71	65.26	68.72
1985	66.23	68.32	67.19										

Source: American Metal Market

T.136

Month End Open Interest of Copper Futures at COMEX In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	45,821	46,415	48,399	47,315	54,740	49,447	49,408	51,314	60,159	59,732	56,750	55,287
1979	53,776	56,481	55,719	48,857	45,572	43,992	39,372	58,966	63,825	58.451	62,659	64,363
1980	63,132	60,834	41,546	31,618	31,923	32,454	37,303	38,497	46,737	54,201	52,666	44,225
1981	47,300	47,641	48,699	49,784	52,527	52,325	54,011	54,781	57,153	58,054	52,654	52,226
1982	56,469	60,458	62,817	67,700	74,353	65,938	66,049	64,615	69,845	79,365	85,824	92,146
1983	113,044	121,875	116,706	105,451	99,198	101,350	109,829	106,882	108,357	104,204	104,087	106,898
1984	115,648	100,663	107,730	96,293	92,254	82,836	82,946	84,991	83,606	88,418	83,433	86,502
1985	94,398	82,182	82,195									

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

T.142

COPPER

U.S. Imports (for Consumption[4]) of Copper (Unmanufactured), by Sources and Types In Thousands of Metric[2] Tons

Year	Ore & Concentrates	Blister	Refined	Scrap	Australia	Canada	Mexico	W. Germany	Chile	Peru	Philippines	Yugoslavia	Zambia	South Africa	Total U.S. Imports
1975	64.9	89.0	146.8	14.4	3.5	117.5	16.4	—	55.0	43.9	12.6	21.5	—	26.0	324.1
1976	70.7	44.5	381.5	19.7	7.0	148.0	9.1	—	102.0	40.1	15.0	45.6	128.3	4.9	534.7
1977	42.1	46.2	390.8	19.9	3.6	131.2	15.1	10.5	119.7	62.3	18.1	16.8	77.9	11.0	516.7
1978[2]	20.9	78.7	414.7	21.4	10.0	77.3	5.8	8.5	175.8	94.8	12.0	10.9	79.8	15.5	546.4
1979	22.4	68.1	215.2	22.2	2.1	89.0	8.5	6.1	116.2	52.8	15.4	3.4	15.9	2.0	328.3
1980[4]	52.4	44.5	426.9	22.8	5.4	152.4	8.3	.5	126.6	52.5	8.9	4.5	64.9	2.2	547.0
1981	39.1	30.1	330.6	27.0	1.5	108.5	23.8	—	137.8	52.0	20.4	2.4	44.1	—	429.6
1982	118.1	97.4	258.4	28.1	3.7	111.0	64.4	—	233.0	26.8	27.1	—	10.5	—	506.0
1983[1]	90.6	46.4	459.6	43.7		153.8	44.7		292.4	38.9	11.4		24.7	14.0	643.5
1984[3]	11.1	38.9	444.7	4.31											539.8

Note: Includes refined; black, blister, & converter; scrap; & copper content of ore, matte, and regulus. [1] Preliminary. [2] Data prior to 1978 are in THOUSANDS OF SHORT TONS. [3] Estimate. [4] Prior to 1980, data is for general imports. *Source: Department of Commerce; Bureau of Mines*

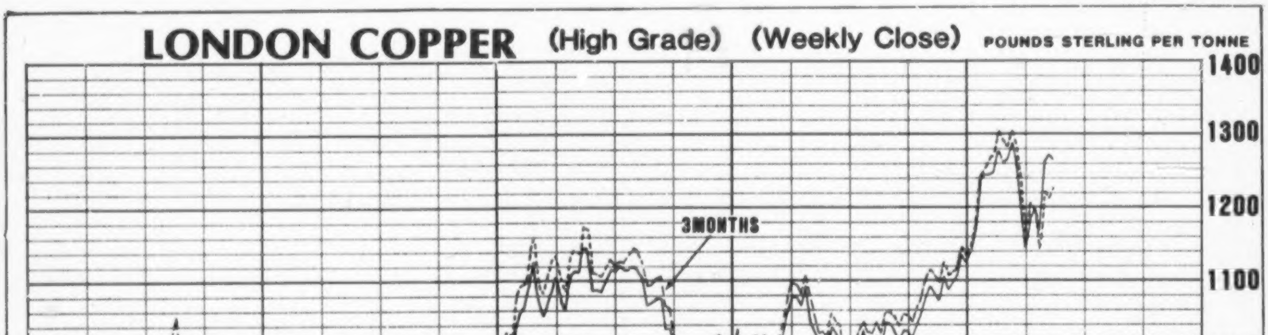
T.137

United States Exports of Refined Copper[1] to Selected Countries In Thousands of Metric[3] Tons

Year	Total U.S. Exports	United Kingdom	China Mainland	Belgium	Brazil	Canada	France	W. Germany	India	Italy	Netherlands	Taiwan	Sweden	Mexico	Japan
1975	172.4	15.1	—	13.2	24.7	6.7	22.8	34.1	.1	22.2	14.9	4.0	1.0		3.0
1976	111.9	20.3	—	1.0	2.8	4.7	21.0	26.8	—	15.6	5.0	—	5.0		4.7
1977	51.5	7.3	—	3.2	.1	8.1	9.8	10.2	—	6.2	2.4	—	1.5		1.5
1978[3]	91.9	13.8	3.0	2.5	3.3	5.1	7.0	18.1	—	19.0	3.0	.9	4.2	1.0	10.0
1979	73.7	6.5	3.1	2.5	6.2	4.5	12.5	3.5	—	11.4	6.6	1.2	2.8	.5	2.0
1980	14.5	2.0	—	.6	1.5	2.9	1.9	.8	.1	1.4	.6	.3	.1	.9	.8
1981	24.4	1.3	—	—	.8	6.4	1.1	1.1	—	.7	—	—	—	7.2	3.9
1982	30.6	1.3	16.1		.4	2.8	1.1	1.9	.1	.1	3.3				.8
1983	81.4	.4	2.2	.7	—	1.7	.6	2.2			60.6	1.0	.1	5.3	5.7
1984[2]	91.4	.7	.1			2.9	.8	1.2			6.4	3.2		2.8	71.2

[1] Bars, ingots or other forms. [2] Preliminary. [3] Data prior to 1978 are in THOUSANDS OF SHORT TONS. *Source: Department of Commerce*

T.138



LONDON COPPER (High Grade) (Weekly Close) POUNDS STERLING PER TONNE

Volume of Trading of Copper Futures at COMEX In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	75,219	88,765	119,423	112,834	117,745	135,363	98,274	160,456	95,360	158,815	151,284	95,150	1,408,688
1979	154,378	228,837	234,044	234,554	212,934	186,097	139,912	210,387	208,869	200,123	163,074	145,732	2,301,033
1980	243,069	205,232	185,692	121,708	102,054	130,678	148,698	125,062	169,370	132,850	127,110	156,556	7,848,080
1981	116,295	131,960	143,662	140,605	104,376	158,396	125,109	190,763	148,456	114,960	144,453	128,345	1,647,380
1982	112,118	166,562	135,434	179,854	174,157	249,276	197,828	245,973	169,909	231,771	273,546	226,257	2,362,625
1983	306,001	381,645	320,574	278,655	226,482	309,540	213,832	295,470	188,201	230,063	289,111	147,340	3,186,914
1984	199,461	259,881	217,635	269,765	196,382	223,551	152,424	215,226	149,465	170,568	279,151	172,856	2,514,311
1985	254,052	261,784	167,686										

Source: Commodity Exchange, Inc. of N.Y. (COMEX) T.143

Exports of Refined Copper from the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	19.7	20.8	14.3	24.9	21.3	13.5	9.8	6.7	11.5	12.5	9.0	8.4	172.4
1976	11.2	8.5	10.8	10.9	8.6	9.4	8.7	9.4	10.0	11.5	7.3	6.8	113.1
1977	3.7	1.8	3.6	5.2	5.2	5.2	5.5	1.6	4.4	4.6	5.0	6.9	52.7
1978	4.7	4.9	11.9	7.3	11.4	10.1	7.2	10.2	22.2	5.3	5.3	8.8	109.3
1979	9.8	9.4	11.6	10.0	8.9	8.7	4.8	2.9	2.9	2.7	7.3	1.5	80.5
1980	1.0	1.4	1.9	1.5	1.5	2.0	1.9	.9	.4	.5	1.0	3.4	17.4
1981	2.9	2.5	5.8	1.2	.9	3.5	1.3	1.7	3.0	.7	2.1	1.8	27.2
1982	.4	.6	.9	1.0	1.6	1.6	2.9	5.4	9.9	8.6	.8	1.1	34.8
1983	13.4	.7	1.5	2.0	3.2	2.9	18.1	13.4	4.1	14.2	2.8	11.2	87.5
1984	17.5	14.4	8.9	6.8	14.7	1.6	14.0	2.3	2.2	1.9	2.8	6.9	94.0

Source: Department of Commerce T.139

Refined Copper Stocks in the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1975	194.9	242.7	259.2	297.8	320.6	334.6	338.2	349.5	341.8	312.3	314.9	324.6
1976	360.7	363.4	370.9	347.8	343.0	325.2	317.1	350.4	355.8	356.1	372.8	416.5
1977	473.8	469.3	487.0	472.3	442.1	447.6	435.0	408.9	370.6	409.4	418.0	456.9
1978	471.1	488.7	491 6	470.2	480.5	465.5	464.0	430.9	418.0	405.9	416.4	408.9
1979	367.0	318.4	287.5	262.1	237.4	197.8	176.0	174.6	158.0	154.6	148.6	167.3
1980	186.3	203.5	228.2	237.1	269.1	277.3	295.7	310.6	301.0	274.6	265.0	246.0
1981	253.0	261.6	249.4	236.8	245.5	243.4	264.7	276.9	276.0	275.5	281.6	301.2
1982	338.6	351.9	375.9	387.3	409.8	422.5	448.1	463.7	449.9	436.2	438.2	470.8
1983	484.5	489.6	501.6	508.9	524.1	519.4	498.7	509.0	522.7	509.1	514.2	505.2
1984[1]	475.3	497.8	499.6	483.3	478.3	463.4	483.2	493.4	490.7	467.1	475.2	457.3
1985[1]	469.7	452.9	380.9									

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.* T.145

Refined Copper Stocks Outside the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1975	591.2	628.8	624.5	655.8	723.1	766.0	784.7	861.5	933.4	1,007	1,072	1,108
1976	1,135	1,150	1,149	1,086	1,048	1,045	1,040	1,080	1,112	1,102	1,102	1,141
1977	1,117	1,158	1,200	1,166	1,183	1,185	1,195	1,210	1,229	1,247	1,240	1,225
1978	1,201	1,231	1,139	1,139	1,104	1,099	1,052	1,059	1,001	960.2	962.0	963.1
1979	942.2	878.2	862.4	765.1	758.8	756.7	727.2	687.1	696.6	648.2	635.4	641.3
1980	619.5	598.3	560.9	534.6	516.5	525.9	531.2	530.9	553.2	527.9	489.1	472.6
1981	476.2	485.2	471.0	463.0	458.8	449.8	446.0	454.9	454.7	433.4	419.4	403.0
1982	432.5	446.3	448.4	459.6	452.0	458.7	479.3	492.0	503.6	522.7	575.1	642.9
1983	699.9	760.8	766.4	759.1	795.5	780.0	722.2	683.0	757.4	767.2	765.2	810.4
1984[1]	832.5	817.5	730.0	653.0	618.5	519.3	551.9	526.5	516.0	493.9	483.9	430.0
1985[1]	429.0	421.4										

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.* T.150

COPPER

Refined Copper Production Outside the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

							Refined							Crude	
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Primary	Secondary
1976	330.3	314.3	335.3	341.0	336.7	355.1	365.3	355.7	371.7	375.2	359.3	359.2	4,199	—4,947—	
1977	358.1	352.1	380.2	363.0	383.5	386.7	361.7	379.7	372.0	367.4	388.5	393.5	4,486	—5,046—	
1978	387.3	344.0	395.9	348.7	401.9	388.1	371.9	348.4	350.0	381.9	364.5	351.5	4,434	—4,868—	
1979	359.8	347.9	360.1	336.9	345.1	364.9	358.1	377.2	366.5	400.9	388.0	382.6	4,388	—4,791—	
1980	384.2	382.8	408.4	398.3	418.7	396.8	392.2	402.9	386.1	394.4	371.8	389.9	4,727	—4,968—	
1981	359.7	347.9	393.6	390.0	388.0	391.4	377.0	377.7	378.8	379.9	366.9	393.8	4,545	—4,891—	
1982	398.2	381.0	442.6	391.8	365.2	403.9	368.4	365.8	386.1	405.8	411.8	372.6	4,693	—5,065—	
1983	386.8	366.3	411.8	400.0	401.2	418.0	381.9	404.3	395.[illegible]	404.5	393.1	409.5	4,773	—5,201—	
1984[1]	380.3	376.9	412.4	375.1	374.1	382.5	357.4	381.5	373.8	405.2	380.8	354.4	4,554	—5,110—	
1985[1]	376.2														

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.*

T.148

Refined Copper Production in the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

							Refined							Crude	
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Primary	Secondary
1976	130.3	126.6	127.7	141.1	140.8	141.6	144.0	139.0	141.1	158.1	153.3	154.0	1,698	—1,445—	
1977	140.9	140.9	162.3	150.6	166.2	152.4	52.2	46.3	124.4	120.6	137.3	113.0	1,507	—1,386—	
1978	129.0	112.5	143.2	141.0	145.3	135.1	96.1	138.9	144.9	163.4	162.4	133.3	1,645	—1,434—	
1979	135.6	135.8	152.2	149.8	154.6	149.4	132.3	144.9	137.5	148.7	170.0	155.5	1,766	—1,542—	
1980	161.0	149.5	162.3	170.4	158.7	167.2	52.4	28.7	27.3	61.0	85.8	136.9	1,361	—1,205—	
1981	133.5	116.3	152.2	155.8	135.0	158.3	131.7	124.0	140.5	127.3	124.9	147.9	1,647	—1,429—	
1982	117.5	123.4	121.5	116.4	107.5	108.6	81.8	77.6	80.6	80.1	92.1	90.8	1,198	—1,026—	
1983	97.3	100.6	131.9	125.5	112.2	114.5	73.1	90.6	91.2	110.4	89.1	100.2	1,237	—1,077—	
1984[1]	98.8	100.7	117.1	120.5	127.9	125.6	123.0	126.1	101.8	119.5	95.4	101.4	1,358	—1,270—	
1985[1]	113.5	101.2													

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.*

T.149

Refined Copper Deliveries to Fabricators in the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	137.9	132.7	206.2	175.5	171.7	158.6	150.6	134.5	151.0	150.6	122.6	137.4	1,829
1977	166.6	138.2	202.0	195.6	185.3	192.4	104.5	100.6	100.5	145.7	135.9	141.0	1,808
1978	137.7	141.3	190.2	148.7	175.9	159.8	133.4	168.9	179.2	170.4	177.7	179.7	1,963
1979	191.1	174.8	193.5	182.4	204.7	192.4	166.4	179.3	157.4	190.4	161.4	156.7	2,151
1980	173.5	153.7	193.5	167.8	176.3	175.0	98.7	85.0	83.7	106.6	128.7	154.5	1,697
1981	153.0	154.2	196.5	165.1	169.1	158.8	150.6	152.7	157.5	159.5	131.6	131.2	1,880
1982	134.6	112.2	131.5	114.2	121.0	111.4	106.2	110.6	131.8	113.3	78.4	119.2	1,384
1983	126.2	141.1	185.3	156.0	165.9	164.4	91.0	105.2	141.2	137.1	110.2	145.3	1,669
1984[1]	118.3	146.1	185.7	184.4	190.7	163.8	150.7	159.3	166.0	167.1	149.5	122.6	1,904
1985[1]	172.0	195.9											

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.*

T.147

Refined Copper Deliveries to Fabricators Outside the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	308.4	309.3	351.0	359.9	336.2	362.0	296.3	331.0	380.7	372.9	315.8	349.3	4,073
1977	331.6	305.6	405.0	342.6	364.9	360.0	326.5	344.9	339.8	350.7	374.0	390.8	4,236
1978	338.5	370.0	422.6	372.1	400.8	426.0	362.4	402.9	382.7	376.8	360.2	376.8	4,592
1979	424.2	395.9	460.4	342.0	349.1	383.3	376.8	357.7	408.5	390.2	377.6	386.4	4,658
1980	386.2	403.2	400.0	407.6	396.9	376.6	357.3	346.7	389.5	406.5	374.4	375.8	4,653
1981	336.8	353.7	383.2	385.4	380.8	382.7	346.0	355.9	393.4	369.5	373.9	364.5	4,426
1982	373.4	380.1	423.6	387.4	348.3	365.4	341.4	342.8	354.9	343.5	331.3	301.6	4,294
1983	303.2	322.9	371.1	325.7	392.2	454.4	407.4	308.3	360.7	389.4	350.2	397.4	4,383
1984[1]	375.0	448.8	477.8	377.1	453.1	358.8	372.5	371.5	382.7	394.6	420.7	353.9	4,787
1985[1]	362.7												

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.*

T.146

Corn

World production of coarse grain (usually considered to include corn, sorghum, barley, oats, and rye) in 1984/85 was estimated by the Foreign Agricultural Service of the USDA in March 1985 at 797 million metric tons (tonnes), up nearly 16 percent from the relatively low 1983/84 output which primarily reflected the short U.S. corn crop in 1983. Corn is the most important feed grain, accounting for about 55 percent of total world coarse grain production.

World corn production in 1984/85 was estimated by the USDA at 445.3 million tonnes, up 27 percent from 1983/84 output. The U.S. is the world's largest producer of corn, accounting for about 44 percent of estimated 1984/85 production compared with 16 percent for China, 8 percent for Eastern Europe, 5 percent for Brazil, 4 percent for the EC, 3 percent for the USSR and less than 3 percent for Argentina.

Global utilization of corn in 1984/85 was projected by the USDA at 432.6 million tonnes, up nearly 5 percent from 1983/84 utilization. The U.S. is also the world's largest consumer of corn, accounting for about 31 percent of expected 1984/85 total use compared with 16 percent for China, 8 percent for Western Europe, 7 percent for the USSR, and 3 percent for Japan.

World corn exports in 1984/85 were projected by the USDA at 67.8 milion tonnes, up nearly 12 percent from the reduced 1983/84 total. The U.S. dominates world exports of corn, accounting for 73 percent of projected total 1984/85 exports compared with about 11 percent for Argentina and close to 5 percent for Thailand and less than 1 percent for South Africa. Major destinations of corn exports are Japan, the Soviet Union, the EC, Mexico, Spain, Portugal, South Korea and Taiwan. Corn export prospects are influenced not only by the availability and price of other feed grains but also by other substitutes such as feed wheat, grain byproducts, manioc, and citrus pulp.

Global 1984/85 ending stocks were projected at 46.7 million tonnes, representing less than 11 percent of estimated utilization compared with 1983/84 ending stocks of only 33.9 million tonnes, which represented only 8 percent of that season's utilization.

U.S. corn production in 1984 was up about 83 percent from the drought-stricken and PIK-reduced 1983 crop, but still about 7 percent less than the record high production in 1982. Growers planted 34 percent more acreage than in 1983, harvested acreage was up 39 percent and average yield was up about 31 percent. Total U.S. supply of corn for the 1984/85 season was estimated by the USDA in March 1985 at 8.38 billion bushels, up only about 15 percent, because beginning stocks were only 723 million bushels versus 3.12 billion at the start of the 1983/84 season. About one-third of U.S. corn production is fed to livestock and poultry on the farms where it is produced. The rest enters the marketing system, mostly through country elevators.

U.S. feed use of corn in 1984/85 was expected to increase to 4.20 billion bushels from 3.74 billion in 1983/84. Feed use of corn in the U.S. is positively related to the number of animal units or cattle on feed. The number of grain-consuming animal units (GCAU) in 1984/85 was estimated by the USDA in late 1984 at 77.5 million down slightly from 78.1 million in 1983/84, but feeding rates were expected to increase because of lower corn prices. It is estimated that feed use of corn increases (decreases) by 0.4 to 0.6 percent for a 1-percent decrease (increase) in the price of corn. Also, in the past, a 10-percent rise in GCAU's has been associated with a 5 percent rise in corn feed use, and vice versa.

Corn exports by the U.S. in 1984/85 were projected by the USDA in April 1985 at 1.95 billion bushels, slightly above 1983/84 exports of 1.86 billion bushels. The strong U.S. dollar impeded U.S. corn exports to some extent, with purchases by Japan in the first half of the season considerably below the year-earlier level. However, the major feature to U.S. corn exports, which boosted over-all prospects was the heavy buying by the Soviet Union, which accounted for 40 percent of total U.S. corn exports in the first half of the season.

The U.S. corn carryover on September 30, 1985 was projected by the USDA at 1.18 billion bushels versus only 723 million at the end of the 1983/84 season representing about 16 percent of projected utilization in the 1984/85 season versus 11 percent a year earlier. However, about 60 percent of the estimated total carryover was expected to be in government hands.

In February 1985, the USDA estimated prospective 1985 U.S. plantings of corn at 82.0 million acres, up 2 percent from 1984 plantings. Farmers enrolled about 59 million acres (70.8 percent) of the total base acreage of about 83.3 million acres in the 1985 acreage reduction program. This program called for a minimum acreage reduction requirement of 10 percent of base acreage. Only farms enrolled in the program are eligible for CCC loans and possible deficiency payments.

U.S. Government Price Support

The loan price for 1985-crop corn is $2.55 per bushel and the target price is $3.03 per bushel—both unchanged from 1984. If the national weighted average market price received by farmers during the first 5 months of the marketing year (October 1985 through February 1986) is below the target price, deficiency payments will be made to eligible producers.

Futures Markets

A 5,000 bushel corn futures contract is traded on the Chicago Board of Trade and a 1,000 bushel contract on the MidAmerica Commodity Exchange in Chicago.

CORN

World Coarse Grains Supply & Demand In Millions of Metric Tons/Hectares

Crop Year	Area Harvested	Yield	Production	World Trade[1]	Utilization Total[2]	Ending Stks[3]	Stocks as % of Util
1980/81	336.6	2.17	732.0	108.4	742.1	82.8	11.3
1981/82	344.0	2.23	768.7	97.3	739.1	112.4	15.1
1982/83	332.4	2.34	777.6	90.3	751.6	138.5	18.3
1983/84[4]	329.0	2.09	689.0	91.6	759.7	67.8	9.0
1984/85[5]	332.4	2.40	797.1	102.3	775.9	89.0	11.5

Note: "Stocks as percent of utilization" represent the ratio of marketing year ending stocks to total utilization. [1] Trade data as expressed in this table exclude intra-EC trade. The trade year is October/September. [2] For countries for which stocks data are not available (excluding the USSR) utilization estimates represent "apparent" utilization, i.e., include annual stock level adjustments. [3] Stocks data are based on an aggregate of differing local marketing years and should not be construed as representing world stock levels at a fixed point in time. Stocks data are not available for all countries and exclude those such as the People's Republic of China and parts of Eastern Europe. World Stock Levels have been adjusted for estimated year-to-year changes in USSR grain stocks, but do not purport to include the absolute level of USSR grain stocks. [4] Preliminary. [5] Projection. *Sources: Prepared or estimated on the basis of official statistics of foreign governments, other foreign source materials, reports of U.S. Agricultural Attaches and Foreign Service Officers, results of Office Research and Related Information.* 150a

World Production of Corn or Maize In Millions of Metric Tons

Crop Year	United States	Argentina	Brazil	Mexico	South Africa	France	China	India	Italy	Bulgaria	Hungary	Yugoslavia	Romania	Indonesia	USSR	World Total
1979–0	201.7	6.4	20.2	9.2	10.8	10.4	60.0	5.6	6.2	3.2	7.3	10.1	12.4	3.6	8.4	424.2
1980–1	168.6	12.9	22.6	10.4	14.6	9.2	62.6	7.0	6.4	2.3	6.5	9.3	10.3	4.0	9.5	406.8
1981–2	206.2	9.6	22.9	12.5	8.4	9.0	59.2	6.9	7.2	2.4	7.0	9.8	11.9	4.5	8.0	438.9
1982–3	209.2	9.0	19.5	7.0	4.1	10.4	60.3	6.5	6.8	3.4	7.8	11.1	12.6	3.2	13.5	437.7
1983–4[1]	106.0	9.5	21.0	9.3	4.4	10.4	68.2	7.9	6.7	3.3	6.5	10.7	12.0	5.1	16.5	350.0
1984–5[2]	194.5	11.0	20.5	9.5	6.5	10.0	72.5	7.2	6.9	3.1	6.5	11.0	11.0	4.0	12.1	445.3

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.* T.151

Acreage and Supply of Corn in the United States In Millions of Bushels

Year Beginning October	Planted All Purposes	Harvested For Grain	Harvested For Silage	Harvested For Forage	Yield, Per Harv. Acre-Bus.	Carry-over, October 1 Farm	Carry-over, October 1 CCC Bins	Carry-over, October 1 Others[3]	Carry-over, October 1 Total	Grain Production	Imports[2]	Total (All Supply Grain)
	In Millions of Acres											
1979–0	81.4	72.4	8.0	.4	109.5	794.5	— 509.5—		1,304	7,928	1.1	9,233
1980–1	84.0	73.0	9.3	.6	91.0	920.5	— 696.6—		1,617	6,639	1.2	8,258
1981–2	84.1	74.5	8.3	.4	108.9	489.9	— 544.4—		1,034	8,119	1.2	9,154
1982–3	81.9	72.7	8.3	.3	113.2	1,243	— 930.7—		2,174	8,235	.9	10,410
1983–4	60.2	51.5	7.8	.3	81.1	1,510	—1,610 —		3,120	4,175	2.5	7,298
1984–5[1]	80.4	71.8	7.5	.3	106.6	346.9	— 375.4—		723	7,650	1.0	8,374
1985–6[4]	82.0											

[1] Preliminary. [2] Includes grain equivalent of cornmeal & flour. [3] Interior mills & elevators and terminal mkts. [4] Estimate. *Source: Commodity Economics Division, U.S.D.A.* T.152

U.S. Corn Supply and Disappearance In Millions of Bushels

Year & Periods Begin. Oct. 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed	Total	Exports	Total Disappearance	Gov't. Owned[1]	Privately Owned[2]	Total
1981–2	1,034	8,119	1.2	9,154	709.4	82.7	19.4	4,202	5,013	1,967	6,980	302.4	1,872	2,174
Oct.–Dec.	1,034	8,119	.4	9,153	153.2	16.8	—	1,517	1,687	545.5	2,233	247.6	6,673	6,921
Jan.–Mar.	6,921	—	.3	6,921	128.4	20.2	3.9	1,181	1,333	489.4	1,823	261.7	4,837	5,098
Apr.–May	5,098	—	.1	5,098	119.4	15.2	12.1	662.5	809.2	409.0	1,218	269.7	3,610	3,880
June–Sept.	3,880	—	.4	3,881	308.4	30.5	3.4	841.2	1,184	523.0	1,707	302.4	1,872	2,174
1982–3[3]	2,174	8,235	.9	10,410	774.3	109.0	14.5	4,522	5,420	1,870	7,290	1,166	1,954	3,120
Oct.–Dec.	2,174	8,235	.3	10,409	175.2	27.9	—	1,489	1,692	512.7	2,205	429.0	7,776	8,205
Jan.–Mar.	8,205	—	.2	8,205	140.0	28.0	1.3	1,330	1,499	507.9	2,007	483.4	5,715	6,198
Apr.–May	6,198	—	.1	6,198	125.0	17.6	10.3	812.8	965.7	308.5	1,274	491.7	4,432	4,924
June–Sept.	4,924	—	.3	4,924	334.1	35.5	2.9	890.9	1,263	540.9	1,804	1,166	1,954	3,120
1983–4[4]	3,120	4,166	2.5	7,289	868.9	86.8	18.9	3,726	4,700	1,866	6,566	201.0	521.3	722.3
Oct.–Dec.	3,120	4,166	.3	7,286	200.3	19.3	—	1,630	1,850	528.9	2,379	1,230	3,678	4,907
Jan.–Mar.	4,907	—	.8	4,908	160.0	22.4	1.1	967.4	1,151	510.0	1,661	1,198	2,049	3,247
Apr.–May	3,247	—	.7	3,248	155.0	16.5	15.5	578.7	765.7	339.7	1,105	818.6	1,324	2,143
June–Sept.	2,143	—	.7	2,143	353.6	28.6	2.3	549.2	933.7	487.3	1,421	201.0	521.3	722.3

[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary. [4] Estimate. *Source: Commodity Economics Division, U.S.D.A.* T.154

Corn Production Estimates and Cash Prices in the U.S.

Crop Year	Corn for Grain Production Estimates — In Thousands of Bushels: July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Final	St. Louis No. 2 Yellow ($ per bushel)	Los Angeles No. 2 Yel. ($ per bushel)	Season Farm Avg. Price[1] ($ per bushel)	K.C. White No. 2 ($ per bushel)	Value of Production (Million Dollars)
1976–7	6,552,665	6,186,979	5,891,823	5,865,243	6,063,459	6,216,032	6,289,169	2.25	2.86	2.15	2.91	13,524
1977–8	6,330,668	6,092,054	6,229,084	6,303,034	6,366,864	6,357,424	6,505,041	2.23	2.99	2.02	3.30	13,107
1978–9	6,145,421	6,503,190	6,797,650	6,823,720	6,890,310	7,081,849	7,267,827	2.51	3.39	2.25	2.93	16,281
1979–0	6,662,681	7,108,938	7,268,175	7,390,365	7,585,535	7,763,771	7,928,139	2.73	3.74	2.52	4.70	19,904
1980–1	7,284,036	6,645,842	6,534,370	6,466,622	6,461,244	6,647,534	6,639,396	3.35	4.48	3.11	4.96	20,571
1981–2	7,115,069	7,734,941	7,940,421	8,081,444	8,097,231	8,200,951	8,118,650	2.61	3.92	2.50	2.60	20,406
1982–3	—	8,315,088	8,318,678	8,314,938	8,329,808	8,397,334	8,235,101	2.98	3.93	2.68	3.35	22,070
1983–4[2]	—	5,236,558	4,390,443	4,259,408	4,120,983	4,203,777	4,174,698	3.45	4.22	3.20	4.70	13,360
1984–5[2]	—	7,667,721	7,551,991	7,497,831	7,527,206	7,649,995				2.80		21,420

[1] Includes an allowance for unredeemed loan & purchase agreement deliveries valued at the average loan rate. [2] Preliminary. *Source: Economic Research Service; Crop Reporting Board, U.S.D.A.* T.153

Production of Corn (For Grain) in the United States, by States In Millions of Bushels

Year	Illinois	Indiana	Iowa	Kansas	Kentucky	Michigan	Minn.	Missouri	Nebraska	No. Car.	Ohio	Pa.	South Dakota	Wisconsin	Texas
1977	1,163	633.4	1,092	161.3	132.3	197.2	600.0	201.4	648.5	88.7	380.1	106.7	126.9	291.2	161.7
1978	1,240	669.6	1,478	153.0	119.9	194.4	643.8	200.1	762.8	121.6	379.1	115.9	177.6	294.0	144.0
1979	1,414	675.4	1,664	172.0	132.6	237.5	606.0	240.0	822.3	128.4	417.5	121.6	210.9	317.2	132.3
1980	1,066	602.9	1,463	110.9	103.6	247.0	610.1	109.7	603.5	103.8	440.7	96.0	121.9	348.4	117.0
1981	1,454	654.0	1,759	148.1	149.0	273.6	744.7	213.4	791.2	140.9	360.0	134.4	180.6	378.0	127.5
1982	1,499	790.0	1,578	139.1	154.5	293.2	734.5	199.0	748.0	155.4	456.0	126.1	193.7	361.8	119.7
1983	624.1	340.9	743.9	85.6	46.1	165.6	367.1	72.9	470.5	76.8	224.0	72.5	104.4	223.1	104.8
1984[1]	1,247	705.5	1,445	108.8	146.0	220.1	689.1	154.4	799.3	145.8	460.2	148.5	186.3	344.5	144.2

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.157

Corn (Shelled & Ear) Stocks in the United States In Millions of Bushels

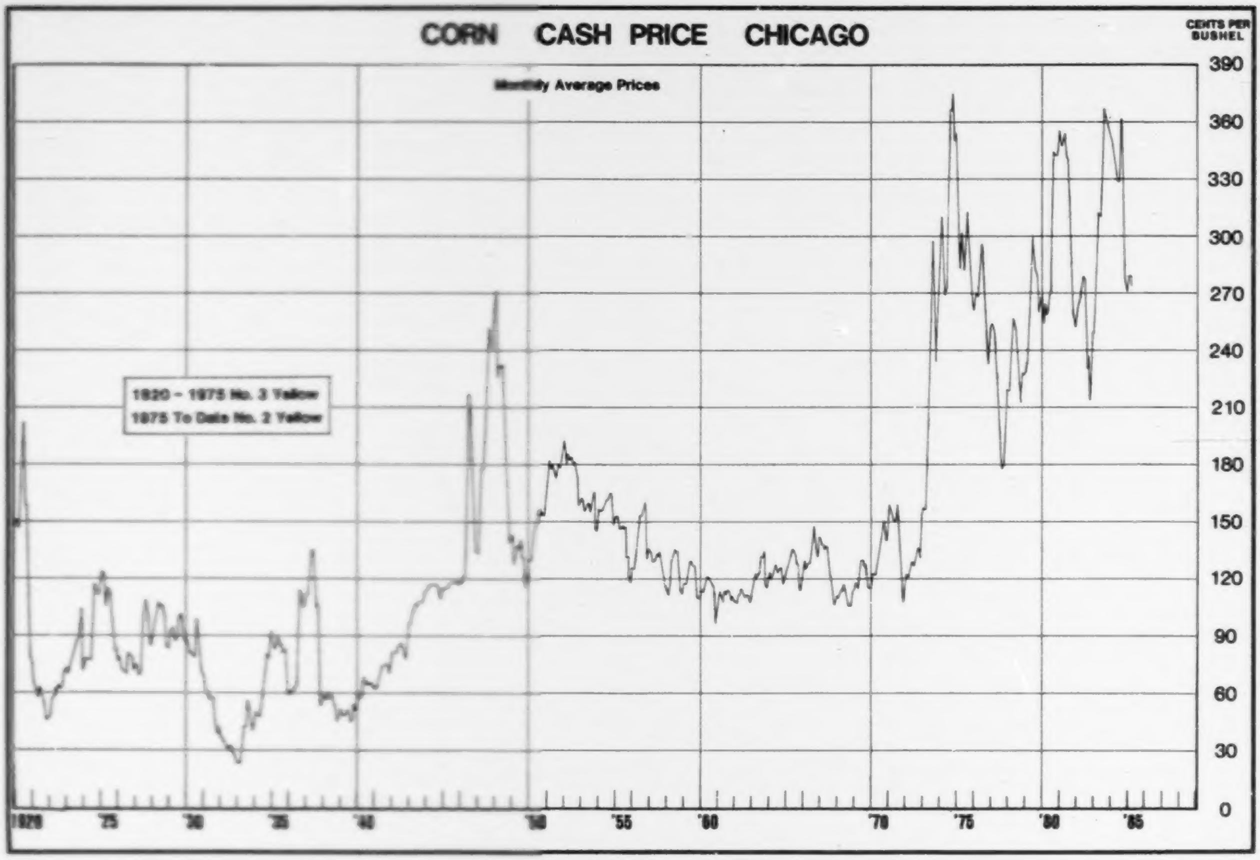
Year	On Farms				Off Farms				Total Stocks			
	Jan. 1	Apr. 1	June 1	Oct. 1[2]	Jan. 1	Apr. 1	June 1	Oct. 1[2]	Jan. 1	Apr. 1	June 1	Oct. 1[2]
1976	3,196	1,920	1,290	233	1,270	913	577	166	4,467	2,833	1,867	399
1977	3,345	2,134	1,578	446	1,544	1,159	787	438	4,890	3,293	2,365	884
1978	3,824	2,517	1,849	659	1,679	1,360	989	445	5,503	3,877	2,837	1,104
1979	4,638	3,178	2,318	794	1,681	1,322	969	509	6,319	4,500	3,287	1,304
1980	5,036	3,437	2,552	920	1,844	1,416	1,093	697	6,880	4,854	3,644	1,617
1981	4,139	2,640	1,817	490	1,718	1,346	956	544	5,857	3,986	2,773	1,034
1982	4,986	3,592	2,734	1,243	1,934	1,506	1,146	931	6,921	5,098	3,880	2,174
1983	5,936	4,242	3,094	1,510	2,269	1,956	1,830	1,610	8,205	6,198	4,924	3,120
1984[1]	3,080	1,930	1,211	347	1,833	1,317	932	375	4,913	3,247	2,145	723
1985[1]	4,248				1,560				5,808			

[1] Preliminary. [2] Old crop only. *Source: Crop Reporting Board, U.S.D.A.* T.156

Distribution of Corn in the United States In Millions of Bushels

Year Beg. Oct.	Shipments: Wet Corn Milling (Grind)	Corn Meal[4]	Corn Flour Etc.	Hominy Grits (Food)	Breakfast Foods[3]	Starch	Glucose & Dextrose	Fuel Alcohol[2]	Total Shipments	Seed	Livestock Feed[5]	Exports (Incl. Grain Equiv. of Pdt's.)	Total Utilization	Domestic Disappearance
1975–6	343	18	15	11	24				482	20	3,603	1,711	5,804	4,093
1976–7	362	17	17	10	25				505	20	3,608	1,684	5,805	4,121
1977–8	398	121							470	20	3,744	1,948	6,282	4,334
1978–9	425	124							601	19.5	4,323	2,133	7,077	4,944
1979–0	455	127							655	20.0	4,508	2,433	7,616	5,183
1980–1	480	160				130	185	75	735	20.2	4,133	2,355	7,223	4,868
1981–2	510	162				125	190	120	811	19.4	4,202	1,967	6,980	5,013
1982–3	540	163				125	190	180	898	14.5	4,522	1,870	7,290	5,420
1983–4[1]	585	161				125	190	210	975	18.9	3,726	1,866	6,566	4,700
1984–5[6]	620	160						250	1,050	20.0	4,001	2,075	7,126	5,051

[1] Preliminary. [2] Fuel, Industrial & Beverage Alcohol. [3] Assumes sizeable quantities of corn flour are purchased by breakfast food mfg. from the dry milling industry. [4] Regular & degermed. [5] Feed & waste (residual, mostly feed). [6] Forecast. *Source: Commodity Economics Division, U.S.D.A.* T.155



Average Cash Price of Corn, No. 2 Yellow (15 Days) at Chicago In Cents Per Bushel

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average[1]
1975–6	274	259	259	262	270	268	268	284	296	296	287	277	275
1976–7	249	233	244	253	254	252	250	241	227	205	178	180	230
1977–8	184	214	219	219	221	236	251	257	251	228	217	213	226
1978–9	222	228	227	229	235	242	253	266	283	300	282	278	254
1979–0	273	259	269	254	265	260	261	270	270	308	336	344	281
1980–1	343	343	354	356	349	348	353	347	341	341	309	272	338
1981–2[2]	261	260	252	263	263	267	278	279	277	267	241	235	262
1982–3[2]	213	238	243	253	274	299	312	311	329	336	367	361	295
1983–4[2]	349	350	338	329	328	351	360	360	362	346	333	309	343
1984–5[2]	284	276	271	279	279								

[1] Weighted average by carlot sales. [2] Preliminary. Source: *Economic Research Service, U.S.D.A.* T.161

Average Cash Price of Corn, No. 2 Yellow at Omaha In Dollars Per Bushel

Crop Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1979–80	2.37	2.32	2.36	2.26	2.33	2.23	2.32	2.43	2.50	2.81	2.98	3.01	2.49
1980–81	3.16	3.34	3.30	3.29	3.18	3.17	3.24	3.24	3.19	3.15	2.79	2.51	3.13
1981–82	2.44	2.39	2.37	2.47	2.45	2.48	2.61	2.65	2.65	2.54	2.23	2.23	2.46
1982–83	2.12	2.35	2.37	2.42	2.62	2.82	3.09	3.10	3.11	3.18	3.39	3.32	2.82
1983–84	3.23	3.24	3.17	3.11	3.03	3.25	3.33	3.35	3.37	3.22	3.11	2.94	3.20
1984–85	2.71	2.61	2.55	2.60	2.61								

Source: *Economic Research Service, U.S.D.A.* T.161a

Weekly Outstanding Export Sales & Accumulated Exports—U.S. Corn In Thousand Metric Tons

Marketing Year 1984/85 Week Ending	1984/85		1983/84		1982/83		1981/82	
	Outst. Sales	Accum. Exports	Outst. Sales	Accum. Exports	Outst. Sales	Accum. Exports	Outst. Sales	Accum. Exports
Oct. 4	16,489	276	17173.7	376.1	112017	763.0	12460.5	767.1
11	16,937	913	16928.3	1285.6	10914.3	1680.2	12119.6	1890.8
18	17,121	1,708	16780.9	2317.5	10608.7	2506.3	11395.2	3403.4
25	16,581	2,941	16761.6	3534.9	10500.5	3473.2	11123.1	4281.6
Nov. 1	16,106	4,195	15754.6	4934.8	9934.2	4557.0	10816.2	5444.7
8	15,386	5,384	15158.0	6500.5	10115.0	5777.6	11180.6	6440.4
15	14,357	6,958	15263.0	7882.3	10635.0	6953.6	10577.1	7744.5
22	13,627	8,262	14401.5	8931.4	10474.7	7941.5	10177.7	8942.2
29	12,765	10,084	15186.9	9945.6	9889.2	8941.2	9964.5	9976.3
Dec. 6	12,058	11,321	14608.1	11410.4	9712.7	10047.6	9266.1	11244.0
13	11,252	12,573	14080.4	12377.8	10306.1	10878.6	9254.7	12331.5
20	9,923	14,018	13604.7	13536.0	10173.0	11910.6	8510.1	13301.0
27	9,113	15,154	13046.3	14383.9	10311.6	12744.6	8247.5	14076.1
Jan. 3	9,357	16,262	12624.6	15161.5	10169.1	13529.6	8371.1	14933.9
10	10,002	17,923	12258.1	16321.7	10241.4	14826.5	8380.6	15880.0
17	9,512	18,839	11905.0	17246.9	10952.1	15606.6	8054.6	16893.4
24	8,726	19,945	11407.2	18179.2	10926.4	16783.4	8041.7	17845.4
31	7,712	21,010	11131.6	19103.9	11118.9	17798.8	7944.9	18808.6
Feb. 7	8,966	21,786	10868.6	19925.9	10814.1	18996.4	8086.9	19745.8
14	8,529	22,731	10954.9	20769.6	10770.3	19981.7	8863.5	20523.7
21	7,850	23,683	10533.7	21820.4	10713.1	21143.1	8099.1	21575.7
28	7,778	24,955	10776.3	22952.4	11035.8	22226.1	9658.2	22686.9
Mar. 7	7,537	25,905	11560.6	23607.3	11137.6	23253.8	10909.3	23828.8
14	7,877	26,876	11500.4	24679.7	11013.7	24332.6	10873.6	24833.8
21	8,343	27,856	11299.5	25684.5	11100.9	25396.4	10071.8	26128.3
28	8,322	28,854	10914.8	26853.5	11477.4	26056.6	9786.6	27243.3
Apr. 4			10711.3	27879.8	11079.9	26865.5	10006.8	28355.3
11			10378.5	28768.2	11223.6	28088.8	10050.3	29545.9
18			9977.3	29725.0	11185.6	28928.7	9762.5	30465.6
25			9477.5	30741.4	11013.6	29583.8	9645.1	31750.6
May 2			9207.3	31788.3	10867.3	30462.4	9005.7	32933.0
9			8799.9	32514.2	11021.4	31324.8	8654.2	34239.5
16			8171.6	33606.4	10921.8	32336.0	7887.5	35741.7
23			7814.8	34609.3	10856.5	33463.6	7073.8	37131.8
30			7734.0	35288.5	10573.8	34139.4	6714.7	38205.1
June 6			7798.0	35959.4	10048.2	35130.5	6050.3	39645.1
13			7392.4	36622.3	9923.0	36123.0	5856.8	40394.2
20			6915.6	37267.2	9803.4	36976.4	5508.7	41404.1
27			6501.4	38193.2	9032.7	37698.8	4966.0	42258.1
July 4			6151.2	38795.9	8679.9	38478.8	5025.2	42840.3
11			6393.6	39345.8	8282.9	39257.8	4887.8	43619.6
18			6266.2	39921.0	8015.5	39982.7	5161.3	44297.2
25			6406.5	40623.1	7689.7	40710.5	4933.7	45106.1
Aug. 1			6400.4	41217.4	7438.1	41302.8	4884.4	45780.0
8			5834.9	42212.3	7296.8	41887.0	4484.0	46444.5
15			5614.7	42921.1	6679.1	42542.3	4411.4	47250.5
22			4987.1	43581.9	5649.8	43528.5	4138.1	47966.1
29			4377.8	44489.0	4845.1	44365.7	3749.1	48487.6
Sept. 5			3775.2	45083.8	4154.8	45215.5	3635.1	48924.3
12			3003.7	45511.6	3247.2	46263.3	2962.7	49792.9
19			2497.4	46011.4	2451.1	2214.1	46914.2	50588.7
26			1926.9	46599.2	1862.5	47482.6	1397.7	51350.6

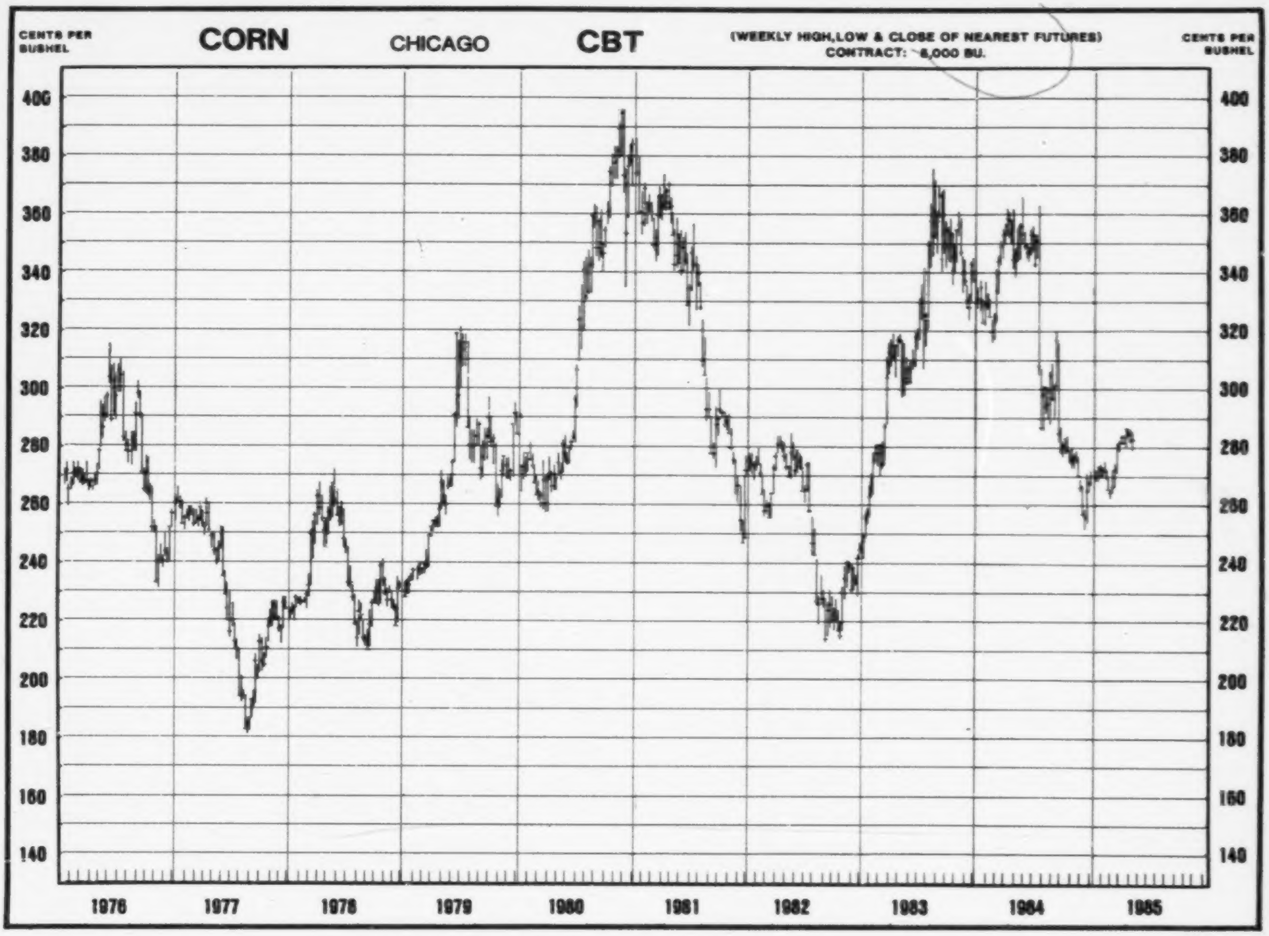
Source: U.S.D.A. Export Sales Report (U.S.D.A.)

T.161b

U.S. Exports[2] of Corn (Including Seed), By Country of Destination In Thousands of Metric Tons

Yr. Begin. October	USSR	Belg. & Luxem.	Canada	Egypt	W. Germany	Greece	Israel	Italy	Japan	Mexico	Nether- lands	Nor- way	Spain	United Kingdom	Total All Exports
1978–9		2,023	364	617	1,435	1,186	258	1,503	8,979		2,193	63	1,747	1,990	53,903
1979–0	5,342	1,622	597	874	1,521	1,119	562	2,072	11,193	3,834	2,108	36	2,503	1,828	61,801
1980–1	4,947	2,065	551	1,129	1,264	718	547	1,859	12,586	3,790	1,773	65	2,651	1,395	59,820
1981–2[1]	7,646	1,974	342	1,348	1,136	734	403	655	10,588	554	1,428	57	5,686	1,091	49,965
1982–3[1]	3,159	2,303	263	1,638	332	221	420	89	13,179	3,987	421	69	2,871	755	47,500
1983–4[1]	6,500			1,500					13,600	3,300			2,800		48,260

[1] Preliminary. [2] Exports of grain only. Does not include corn exported under the food for relief or charity program. *Source: Foreign Agricultural Service, U.S.D.A.* T.165



Volume of Trading of Corn Futures at Chicago In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	1,734	2,281	2,739	3,302	3,751	5,705	5,806	3,999	3,135	4,522	3,794	2,592	43,359
1980	3,287	3,227	3,493	3,690	3,265	3,362	6,722	7,310	6,287	6,609	6,455	6,027	59,735
1981	4,848	4,495	5,036	5,222	3,867	4,785	5,459	5,019	3,626	3,127	3,913	3,978	53,375
1982	2,802	3,390	3,634	3,355	2,754	3,538	3,122	3,552	3,127	3,239	4,634	2,594	39,741
1983[1]	3,638	3,114	5,355	4,440	3,943	4,511	5,627	7,431	5,882	5,180	5,734	3,518	59,623
1984[1]	3,518	3,866	4,248	4,407	4,259	4,111	4,868	3,975	3,289	2,883	3,619	2,439	45,543
1985[1]	2,406	2,369	2,746										

[1] Preliminary. *Source: Chicago Board of Trade* T.164

Month End Open Interest of Corn Futures at Chicago In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	680.9	720.3	784.2	810.7	859.6	951.3	898.7	889.8	860.0	899.8	857.3	836.2
1980	838.9	799.0	789.8	787.7	766.7	721.6	1,048.8	1,382.4	1,398.0	1,587.9	1,575.5	1,315.0
1981	1,216.5	1,107.5	1,002.4	846.5	737.5	572.6	568.8	637.8	637.7	724.7	674.6	630.7
1982	708.0	625.6	650.0	610.0	594.5	552.6	581.8	596.6	594.7	663.5	712.1	657.8
1983	776.9	778.5	872.5	832.4	760.0	727.2	792.5	1,127.1	1,134.4	1,163.4	1,138.0	1,062.1
1984	1,022.3	964.0	1,034.3	901.5	776.8	717.8	704.0	712.2	730.6	738.4	657.8	649.4
1985	659.2	588.2	629.0									

Source: Chicago Board of Trade T.163

High, Low & Closing Prices of May Corn Futures at Chicago In Cents per Bushel

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1981	High	325	322	325	318	358	369½	379	394	418	416½	393	380	369	372½	363½	418
	Low	311	308¾	311¾	307	318¼	341½	357	358	385¼	354¼	362½	365	350¼	355½	339	307
	Close	312¾	312¾	313	318	356¾	368¾	365¼	385¾	415¾	385¼	364¾	369¾	364¾	361	341	—
1982	High	398¼	410¾	398	385¾	395½	370¾	338¼	338¼	320½	297½	287½	291	275½	283¼	277¼	410¾
	Low	385	385¼	371¼	360¾	364¼	323	310	315½	290¾	261½	277½	269¼	265¼	274	267½	265¼
	Close	397¾	390½	380¾	366	370¾	333¾	318½	318½	291	281	285½	270	274¼	276	268¾	—
1983	High	317½	322½	313½	307	294¼	281	259¼	253	258	255	278	292	315½	318¾	319¼	322½
	Low	310	313¼	303	291¾	274½	250¾	243½	236¼	242¾	242¾	251	273	282¼	304¼	297¼	236¼
	Close	316	313¼	303	292¾	276½	255¾	248	236¼	247¾	253	277	281½	312¾	317¼	311	—
1984	High	325	324½	320	301½	347	390	385½	359¾	361½	346	338¾	336	357¼	362¼	366	390
	Low	297½	312¼	296¼	286¼	285	341½	345½	337	335¾	329½	324¾	320	331	340	338½	285
	Close	317¾	316¼	297¼	289¾	342½	374½	358½	341¼	340¼	340¼	332¾	332½	353¼	344½	365¾	—
1985	High	312¾	322	321	330	328¼	302¾	301¼	295¾	292¼	285¼	280¼	281	282			
	Low	300	310	304¾	309¾	289¾	291¼	286½	285½	283¼	272¾	274	269¾	270			
	Close	309¼	314	316½	326¾	297¼	295½	286½	287½	284½	276	278½	271¼	281¼			
1986	High	282¾															
	Low	274¾															
	Close	282¾															

Source: Chicago Board of Trade T.162

Corn Price Support Data in the United States

Year Begin. Oct. 1	National Avg. Loan Rate	Grain Reserve Loan Rate	Target Price	Placed Under Loan	Redemptions	Resealed	Total Deliveries[2]	Stocks at Close of Mkt. Year (Sept. 30)					CCC Inventory — As of Dec. 31 —	
								CCC Inventory	Under CCC Loan	Farmer Owned Reserve	"Free" Stocks	Total Stocks	CCC Owned	Under CCC Loan
	¢ Bush.			Millions of Bushels										
1979–0	210	—	220	557	527		—	256.3	82.6	636.4	614	1,617	99.7	801.0
1980–1	225	240	235	840	742		42	237.8	100.8	185.4[4]	424	1,034	256.4	966.0
1981–2[1]	240	255	240	1,977	392		45	302.4			336	2,174	248	1,234
1982–3[1]	255	290	270	1,585	0		0	1,150			440	3,120	429	2,400
1983–4[1]	265		286									722		
1984–5[1]	255		303									1,125		

[1] Preliminary. [2] Includes "delivered to CCC" from original program and deliveries from reseal program and over-deliveries as determined by weight of farm-stored grain when delivered to CCC. [3] Less than 500,000 bushels. [4] Called Reserve Corn under extended loan. *Source: Agricultural Stabilization and Conservation Service, U.S.D.A.* T.159

Corn Under Price Support through the End of the Month (Cumulative Total from Current Season's Crop) In Millions of Bushels

Crop Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1979–0	2.2	17.3	106.1	206.3	347.8	409.5	461.7	488.8	539.1	545.8				
1980–1	2.3	44.6	145.0	386.0	746.7	795.2	816.0	830.6	836.0	838.1				
1981–2	13.5	81.9	418.7	1,049	1,642	1,826	1,903	1,940	1,951	1,962				
1982–3	15.5	76.2	334.5	870.2	1,369	1,505	1,551	1,561	1,567	1,572				
1983–4	.4	14.6	58.1	98.3	138.0	149.1	158.3	160.2	161.1	161.3				
1984–5	2.3	47.2	278.5	631.5	969.6	1,028								

Source: U.S. Department of Agriculture T.158

Corn Oil

Supply & Distribution of Corn Oil In Millions of Pounds

Year Beginning Oct.	Supply				Disappearance									
					Food Uses					Non-Food Uses				
	Production	Imports	Stocks Oct. 1	Total Supply	Shortening	Margarine	Salad & Cooking Oil	Other	Total Food Uses	Foots & Loss	Other	Total Non-Food Uses	Total Domestic Disappearance	Total Exports & Shipments
1973-4	528	1	57	586	6	198	198	2	404	45	1	46	450	68
1974-5	465	2	68	535	7	185	164	1	356	42	—	43	399	84
1975-6	644	1	52	697	4	212	297	1	514	44	1	45	559	98
1976-7	669	10	41	720	3	235	303	2	543	37	1	38	605	59
1977-8	695	3	46	744	4	243	288	—	510	45	1	46	580	88
1978-9	737	—	73	810		223	314						619	121
1979-0	791	—	70	861		222	335						654	141
1980-1	864	—	66	930		217	383		625				673	181
1981-2	872	—	76	948		217	357		593				689	206
1982-3[1]	983	—	53	1,036		217	395		637				723	224
1983-4[2]	1,065	—	89	1,154		192	467		702				775	300
1984-5[2]	1,125	—	80	1,205									800	320

[1] Preliminary. [2] Forecast. *Source: Economic Research Service, U.S.D.A.* T.166

Crude Corn Oil Production in the United States In Millions of Pounds

Crop Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1973-4	45.2	42.4	43.1	45.1	41.8	45.4	46.5	46.8	43.8	40.5	44.0	43.0	528
1974-5	41.2	40.1	40.1	37.0	34.6	38.6	37.6	40.6	38.9	40.5	35.2	40.3	465
1975-6	39.8	40.3	35.4	55.2	53.8	55.1	59.5	61.7	59.1	58.9	65.8	59.6	644
1976-7	62.0	50.4	51.3	48.1	49.0	59.2	55.6	58.1	57.9	64.0	59.3	53.7	668.6
1977-8	58.9	58.0	50.1	54.9	51.6	58.7	57.1	68.0	64.7	60.5	59.7	63.8	695.5
1978-9	65.4	59.8	55.8	47.6	54.9	69.4	67.4	69.7	60.6	61.5	63.9	60.3	736.3
1979-0	61.8	63.3	63.0	62.3	60.0	70.7	64.3	68.3	65.1	66.2	69.9	76.2	791.1
1980-1	80.6	68.0	59.0	65.8	63.6	76.2	69.6	74.3	76.1	76.2	76.4	77.8	863.6
1981-2	81.4	69.2	66.5	56.7	64.9	76.4	71.6	77.1	73.9	76.5	79.3	78.0	871.5
1982-3	79.2	72.6	78.4	78.9	73.1	88.2	79.8	85.9	83.6	82.7	92.0	88.2	982.6
1983-4[1]	87.0	85.7	83.2	92.1	87.5	91.1	88.5	94.5	84.4	90.6	86.4	82.0	1,053
1984-5[1]	88.8	75.5	89.6	87.7	79.8								

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.167

Corn Oil Spot Price, Crude, F.O.B. Decatur (Tank Cars) In Cents Per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1973-4	24.0	25.5	32.0	39.0	45.0	39.5	33.0	38.5	38.0	38.0	47.5	38.0	36.5
1974-5	45.0	45.0	42.0	44.0	40.5	39.0	37.0	27.0	26.5	29.5	31.0	28.0	36.2
1975-6	29.0	28.5	28.5	32.5	28.5	26.5	23.3	19.8	22.0	26.0	23.5	27.0	26.3
1976-7	27.1	27.5	26.0	28.0	36.0	36.0	34.5	35.5	31.0	27.5	23.5	23.2	29.7
1977-8	26.5	31.5	35.0	40.0	44.0	43.0	36.5	35.3	33.0	33.3	31.5	35.5	35.4
1978-9	34.0	35.0	31.0	35.0	34.0	33.3	32.1	33.0	30.0	31.0	32.3	32.5	32.8
1979-0	32.8	29.9	33.3	27.5	29.0	26.0	20.0	23.0	22.0	27.3	29.8	28.0	27.4
1980-1	28.0	27.5	28.0	26.3	25.0	23.8	25.5	24.4	24.5	25.8	22.3	21.5	25.2
1981-2	20.0	21.0	25.0	24.0	29.0	25.0	25.0	24.0	23.5	23.0	20.5	21.0	23.4
1982-3	23.0	23.8	24.0	22.5	24.5	21.5	21.0	22.5	22.0	20.0	25.0	36.0	23.8
1983-4[1]	27.5	28.0	25.8	27.0	25.3	26.5	30.0	38.8	35.7	26.0	23.8		
1984-5													

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.168

Cotton

World production of cotton in 1984/85 was estimated by the USDA at 80.7 million bales, consumption was estimated as high as 69.5 million, and world stocks were expected to rise about 11 million bales to 35.2 million. The 1984/85 production estimate was 10 million bales above the record of 70.8 million set in the 1981/82 season, and ending stocks for 1984/85 were expected to be the largest in history. The average rate of growth during the 1965/66–1974/75 period was 1.2 million bales a year for world cotton production. However, the average increase in the 1975/76–1983/84 period amounted to 1.7 million bales a year. Most of this rapid acceleration was caused by yield increases in China. The 1984/85 forecast of production in China, of 25.3 million bales was significant not only because it represented about one-third of world production, but also because it indicated that production in China of more than 20 million bales a year was a sustainable goal. Because of increases in China's production, foreign cotton production was expected to exceed foreign consumption in 1984/85. Production in foreign countries excepting China grew about 400,000 bales a year during 1965/66–1983/84 and the projected 1984/85 production of 41.8 million accords with this trend. Consumption in foreign countries except China rose from 34.6 million bales in 1965/66 to 46.6 million last season. As with production, 1984/85 consumption estimated for those countries—47.7 million bales—was in line with the trend. The prospects for increased cotton exports from China may lead to reduced future production in other countries.

Stocks of cotton in China were forecast to rise from 7.8 million bales to 15.5 million. China recently experienced problems similar to those in the U.S. during the mid-1960's. High procurement prices to China's farmers were encouraging production while discouraging consumption. At the same time, China's consumers desired more manmade fiber products. The results were very large cotton surpluses. Stocks in foreign countries outside China were expected to rise during 1984/85 because they were drawn down to record lows during 1982/83 and 1983/84. Poor harvests in several important exporting countries, like Pakistan and the Soviet Union, had contributed to the reduction in stocks. Lower world cotton consumption and high interest rates also encouraged a reduction in carryover stocks in importing countries. Mill use in foreign countries outside of China was forecast at 47.7 million bales.

U.S. mill use of cotton was forecast to decline to 5.3 million bales during 1984/85, and a further decline was expected for the 1985/86 season. Mill use peaked at a seasonally adjusted annual rate of 6.4 million bales in January 1984 and then trended lower. This decline was roughly consistent with patterns of mill use during past economic cycles. However, one factor in cotton's favor during 1984 compared with previous business cycles was that its share of mill use on the cotton systems held at 60 to 61 percent since 1977/78. If mill use at seasonally adjusted rates during October 1984 to July 1985 were to fall at an annual rate of about 6 percent, mill use for the 1984/85 season would total 5.3 million bales. If the decline during 1985/86 remains near 6 percent, mill use could fall to about 5 million bales.

U.S. cotton exports were forecast as slipping from 6.8 million bales to 6.1 million in 1984/85 due to rising production in several foreign countries. An additional decline in exports was thought likely in 1985/86, especially if the dollar remained strong. Exports in 1985/86 could fall below 6 million bales.

U.S. imports of cotton textiles rose by 35 percent in 1984. At seasonally adjusted rates, these imports declined during the last months of 1984. They were considered likely to grow only by about 10 percent in 1985.

The U.S. extra long staple (ELS) cotton program for 1985 offered participating growers a target of 103.14 cents a pound and a loan rate of 85.95 cents. The 1984-crop target price and loan rate were 99 cents and 82.5 cents a pound. To be eligible for program benefits, ELS producers could plan no more than 90 percent of their base acreage to ELS, the same as in 1984. The ELS base acreage was estimated at 67,000. Participation in the 1984 program accounted for 50 percent of the base. Planted acreage in 1984 totaled 79,000, and planting in 1985 was expected to decline.

Agriculture Secretary Block announced the major components of the 1985 upland cotton program on September 14, 1984. The 1985 target price for upland cotton was set at 81 cents a pound, the same as in 1984, but the average loan rate for strict low middling 1-$^{3}/_{16}$-inch cotton was raised from 55 to 57.3 cents a pound. To be eligible for target price and loan rate protection, farmers were required to plant no more than 70 percent of their upland cotton base acreage, and were also required to devote the reduced acres to conserving uses. The 30 percent reduction of the program was divided into two parts. On 10 percent of a farm's acreage base, a land diversion payment equal to 30 cents a pound times the farm's program yield was to be made to farmers, regardless of whether the farmer actually planted cotton. No additional payment was to be made on the remaining two-thirds of the conserving use acreages. The 1985 deficiency payment rate was estimated at 19.8 cents a pound. The actual deficiency payments rate was to equal the difference between the 81 cent target price and the weighted average U.S. farm price for upland cotton in calendar 1985 or the loan rate, whichever was higher. The total of deficiency and diversion payments were to be limited to $50,000 per person under the combined wheat, feed grains, cotton, and rice programs. The sign-up period for the upland cotton program extended from October 15, 1984 to March 1, 1985. Each farmer's base acreage in 1985 was to equal the average of the acres planted, and considered planted, to upland cotton in 1983 and 1984.

The 1985 upland cotton program was considered as potentially attractive because the deficiency payment of nearly 20 cents a pound and the paid land diversion payment of 30 cents were high in relation to then-current farm prices. These high rates were also expected to encourage participation by 75 percent or more of the acreage base.

Futures Market

Cotton futures are actively traded on the New York Cotton Exchange.

COTTON

Cotton World Supply and Demand In Thousands of 480-lb. Bales

Yr. Begin. Aug. 1	Beginning Stocks				Production				Consumption				Exports			
	US	USSR	PR China	World Total	US	USSR	PR China	World Total	US	USSR	PR China	World Total	US	USSR	PR China	World Total
1977–8	2,928	2,800	2,800	21,564	14,389	12,470	9,400	63,911	6,509	9,000	11,000	59,717	5,484	4,160	100	19,140
1978–9	5,347	2,465	2,500	26,158	10,856	11,907	9,950	59,639	6,352	9,075	13,100	63,286	6,180	3,756	15	19,790
1979–0	3,958	1,895	1,460	22,642	14,629	12,833	10,100	65,237	6,506	9,100	14,100	65,982	9,229	3,770	12	23,175
1980–1	3,000	2,154	1,548	21,821	11,122	13,498	12,400	64,805	5,891	9,150	15,100	65,778	5,926	4,070	6	19,714
1981–2	2,668	2,585	2,392	21,921	15,646	13,277	13,600	70,756	5,264	9,150	16,200	66,090	6,567	4,295	0	20,238
1982–3	6,632	2,527	1,892	25,395	11,963	11,932	16,500	67,459	5,513	9,200	16,400	68,041	5,207	3,890	75	19,434
1983–4[1]	7,937	1,845	3,017	24,888	7,771	12,280	21,300	67,624	5,926	9,300	16,000	68,685	6,786	3,450	750	19,377
1984–5[2]	2,777	2,125	7,817	24,483	13,292	11,700	27,900	84,269	5,300	9,500	16,500	69,738	6,485	3,200	1,200	20,732

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.168a

World Production of Cotton In Thousands of Bales[3]

Year Begin. Aug. 1	Argentina	Brazil	PR. China	Egypt	India	Iran	Mexico	Pakistan	Israel	Sudan	Colombia	Turkey	United States	USSR	World Total
1975–6	645	1,800	10,700	1,762	5,350	640	910	2,370	225	500	560	2,215	8,500	11,730	54,321
1976–7	740	2,510	10,000	1,828	4,950	720	1,045	2,006	247	735	685	2,190	10,650	12,050	57,487
1977–8	1,015	2,125	9,450	1,840	5,680	820	1,627	2,651	295	915	645	2,650	14,525	12,700	63,836
1978–9	800	2,530	10,000	2,022	6,190	610	1,570	2,183	365	640	373	2,200	10,856	11,830	59,482
1979–0	667	2,629	10,158	2,221	6,274	458	1,509	3,343	346	523	573	2,200	14,629	12,410	64,938
1980–1	384	2,857	12,433	2,428	6,090	290	1,620	3,282	359	441	531	2,290	11,122	13,165	64,527
1981–2	696	2,939	12,975	2,291	6,473	338	1,440	3,438	420	706	406	2,244	15,641	12,975	70,579
1982–3	511	2,985	11,950	2,117	6,320	427	840	3,775	399	959	153	2,241	11,963	11,950	67,515
1983–4[1]	735	2,310	12,282	1,853	5,878	409	1,008	2,188	427	1,006	337	2,388	7,771	12,282	67,187
1984–5[2]	750	3,858	11,652	1,862	6,640	425	1,200	3,750	441	1,038	574	2,691	13,292	11,652	81,505

[1] Preliminary. [2] Estimate. [3] U.S. is in running bales (500 lbs.); all others are 478 pound net weight bales. *Source: International Cotton Advisory Committee* T.169

World Consumption[3] of All Cottons in Specified Countries In Thousands of Bales (478 Pounds Net[2])

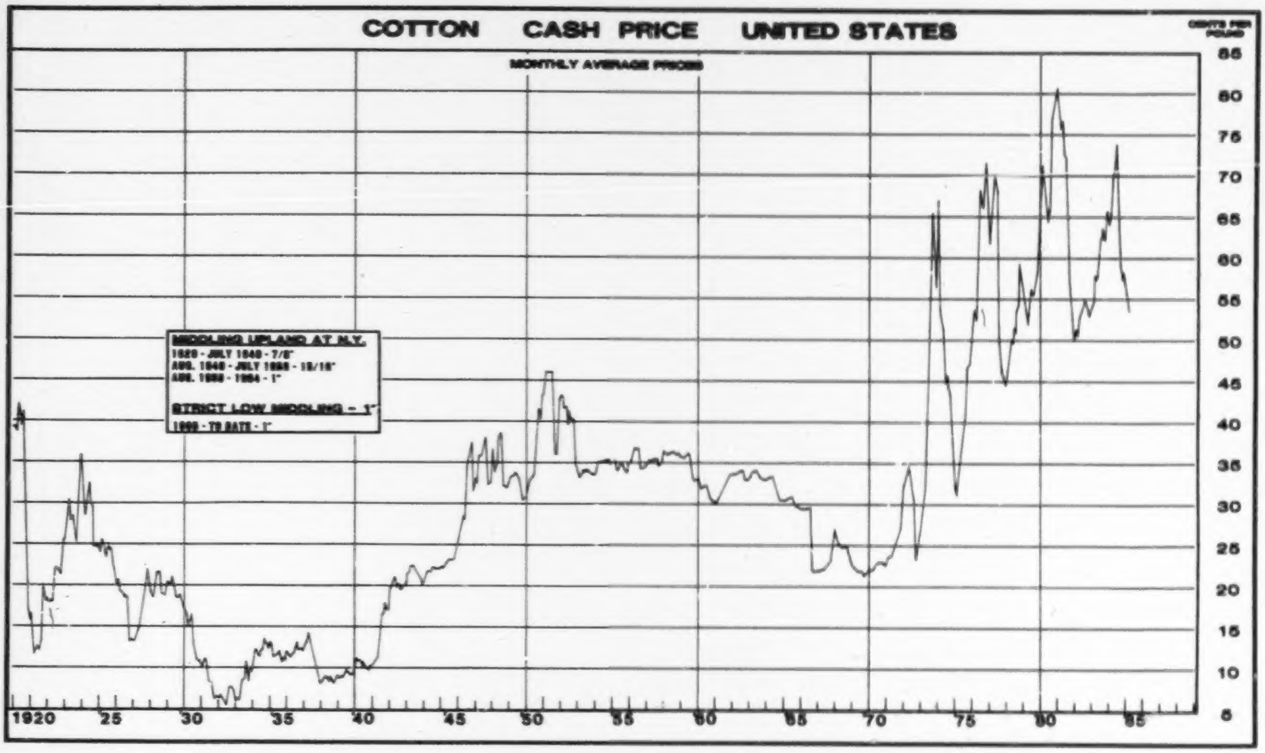
Yr. Beg. Aug. 1	Argentina	Brazil	PR. China	Poland	France	W. Germany	India	Italy	Japan	Mexico	Pakistan	Un. Kingdom	United States	USSR	World Total
1975–6	538	2,041	10,700	697	931	1,022	6,100	901	3,250	835	2,150	494	7,300	8,750	61,043
1976–7	538	2,091	11,400	697	957	962	5,500	923	3,150	760	1,800	491	6,702	8,750	60,594
1977–8	478	2,241	12,100	697	846	807	5,320	841	3,000	740	1,900	415	6,514	8,800	60,825
1978–9	503	2,440	12,700	727	822	777	5,626	979	3,300	760	1,950	447	6,352	8,888	63,005
1979–0	468	2,589	13,444	782	846	789	5,925	1,047	3,400	757	1,972	400	6,506	8,916	65,320
1980–1	385	2,526	14,938	752	767	792	6,314	971	3,285	759	2,102	220	5,891	8,971	66,149
1981–2	359	2,619	16,094	697	743	813	5,809	994	3,423	708	2,351	207	5,264	8,984	65,781
1982–3	443	2,639	16,813	689	765	929	6,228	1,000	3,275	630	2,549	207	5,503	9,039	67,670
1983–4[1]	503	2,400	17,200	689	746	970	6,453	980	3,100	475	2,208	234	5,926	9,100	69,262
1984–5[4]	517	2,400	17,000	700	738	990	6,531	1,000	3,250	500	2,425	234	5,400	9,150	69,766

[1] Preliminary. [2] Except for the U.S. which are in running bales. [3] Includes estimates for hand spinning in some countries. Excludes cotton burned or otherwise destroyed. [4] Estimate. *Source: International Cotton Advisory Committee* T.173

Consumption of American and Foreign Cotton in the United States In Thousands of Bales[1]

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1975–6	505	531	683	550	624	570	559	712	542	552	692	445	6,965
1976–7	524	626	528	501	582	510	528	653	507	507	616	395	6,477
1977–8	494	606	512	505	562	493	501	620	484	483	575	383	6,218
1978–9	459	569	482	595	435	603	471	506	584	484	489	503	6,180
1979–0	472	482	630	482	436	604	507	513	622	496	478	487	6,209
1980–1	443	456	597	458	475	435	446	539	435	441	531	385	5,641
1981–2	429	517	448	403	400	378	398	493	410	392	460	317	5,038
1982–3[2]	386	474	416	391	425	404	430	549	431	441	543	369	5,259
1983–4[2]	453	560	459	446	468	469	448	548	423	442	503	354	5,573
1984–5[2]	416	494	415	377	408								

[1] American cotton, running bales; foreign cotton, equivalent 500 lb. bales. [2] Preliminary. *Source: Bureau of the Census* T.188



Average Spot Cotton Prices,[2] C.I.F. Northern Europe In Cents Per Pound (Equivalent U.S. ¢/Lb.)

Crop Year (Aug.-July)	M 1"		SM 1 1/16–3/32"										SM 1 1/8"	
	U.S. Orleans/ Texas	Pakistan N.T. Sind	Guatemala	U.S. Memphis Terr. SM	Greece SM	Egypt Giza67 FG	Mexico SM	Nicaragua SM	Syria SM	USSR Pervyi 31/32 MM	Tanzania A.A. No. ½	Turkey Izmir (12 MIR)	U.S. Calif.	Uganda BP52
1977	65.81	59.50	64.72	72.31	70.04		73.87	68.74	74.25	70.60	83.82	76.53	75.27	102.25
1978	63.23		75.23	72.52	83.09		72.94	70.21	72.08	72.55		73.46	77.99	N.A.
1979–80	75.36	75.41	83.63	87.49	84.00	136.37	85.86	86.13	83.50	85.89	92.33	90.25	90.69	N.A.
1980–81	89.14	84.94	93.47	101.23	83.80	137.66	94.91	92.46	101.00	92.80	103.25	96.65	101.85	N.A.
1981–82	66.76	65.65	72.87	76.30	81.00	115.73	75.28	72.17	79.82	73.02	88.08	77.55	79.79	N.A.
1982–83	68.11	65.59	76.14	77.94	85.74	110.07	76.39	75.70	81.10	71.00	87.50	83.44	84.99	N.A.
1983–84[1]	78.41	75.20	86.81	87.09	94.37	134.07	87.42	86.02	89.94	91.19	95.14	92.74	94.90	
Nov. '84	66.90	60.15	70.15	73.65	79.00	N.A.	73.35	70.60	76.00	N.A.	81.60	79.10	77.00	
Dec. '84	66.88	59.19	69.38	74.13	76.75	134.80	71.88	69.25	75.00	N.A.	81.00	75.25	77.13	

[1] Preliminary. [2] Generally for prompt shipment. *Source: International Cotton Advisory Committee* T.172

Supply and Distribution of All Cotton in the United States In Thousands of (480-Lb. Net Weight) Bales

Crop Year Beginning Aug. 1	Supply												Distribution		
	Carryover, Aug. 1						Ginnings								
	Privately Owned														
	At Mills	In Public Storage	Elsewhere	Total	CCC Held	Total Stocks	Current Crop[2] Less Ginnings	New Crop[3]	Total[4]	Imports	City Crop	Total	Mill Consumption	Exports	Total
1978–9	1,120	3,806	400	4,057	1,232	5,326	10,405	72	10,477	4	0	15,807	6,352	6,180	12,532
1979–0	928	2,604	250	3,145	635	3,782	14,190	200	14,390	5	0	18,177	6,506	9,229	15,735
1980–1	955	1,822	250	2,485	542	3,027	10,627	44	10,671	28	1	13,897	5,891	5,926	11,817
1981–2	883	1,688	25	1,943	652	2,595	15,106	40	15,146	26	0	17,767	5,264	6,567	11,831
1982–3	830	5,269	300	2,640	3,759	6,399	11,486	2	11,488	3	0	17,907	5,513	5,207	10,720
1983–4[1]	755	6,656	150	2,795	4,766	7,561	7,502	165	7,665	9	0	15,075	5,926	6,786	12,712
1984–5[5]	795	1,761	350	2,316	590	2,906							5,300	6,065	11,365

[1] Preliminary. [2] Less ginnings prior to Aug. 1. [3] Ginnings prior to Aug. 1 end of season. [4] Includes inseason ginnings. [5] Estimate. *Source: Economic Research Service, U.S.D.A.* T.170

COTTON

Purchases Reported by Exchanges in Designated U.S. Spot Markets In Running Bales

Year Beginning August 1	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1979	284.889	229.192	529.677	1.499.688	2,498,483	2,901,588	1,068,127	642,337	333,008	139,875	123,119	110,892	10,360,875
1980	107,920	92,769	499,579	961,488	1,565,792	1,143,395	878,913	576,871	268,136	243,096	142,885	121,300	6,602,144
1981	115,017	201,791	468,124	821,205	1,606,620	2,049,345	1,163,850	877,323	403,824	449,948	277,553	420,336	8,854,936
1982	122,082	150,629	375,083	717,258	1,160,522	1,139,575	793,071	829,016	356,510	434,794	478,658	247,150	6,804,348
1983	236,607	270,662	688,534	1,022,458	1,639,279	1,697,601	750,963	424,475	162,863	171,484	59,012	126,720	7,250,658
1984	258,511	154,557	271,195	558,999	1,153,086	1,015,087	570,259						

[1] Purchases are for 10 markets; commencing February 1980 purchases are for nine markets; and commencing March 28, 1983 purchases are for eight markets. *Source: Agricultural Marketing Service: U.S.D.A.* T.190a

Average Price of Strict Low Middling, $1\frac{1}{16}''$, Cotton at Designated U.S. Markets ¢/Lb. (Net Weight)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1978–9	59.78	60.04	64.08	65.65	64.39	61.48	60.59	58.70	58.05	60.90	63.38	61.87	61.58
1979–0	62.08	62.15	62.88	63.40	66.20	72.40	80.66	79.24	79.05	78.27	72.41	79.01	71.48
1980–1	85.60	87.51	85.78	87.05	87.23	85.11	83.30	81.52	81.15	78.46	78.12	75.08	82.99
1981–2	66.44	60.81	60.63	57.47	55.11	57.82	57.26	59.73	62.03	62.44	61.10	64.96	60.48
1982–3	60.38	58.98	58.58	58.20	59.65	60.16	61.72	66.05	65.33	66.88	70.74	70.27	63.08
1983–4	72.93	71.68	72.01	73.41	73.04	70.55	71.38	74.89	75.64	79.44	75.00	67.35	55.00
1984–5	63.01	61.16	61.15	60.43	60.45	59.96	58.65						

Note: Grade 41. *Source: Department of Agriculture* T.190

Average Spot Cotton, $1\frac{3}{32}''$, Price (SLM) at Designated U.S. Markets In Cents Per Pound (Net Weight)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average	$1\frac{1}{32}''$	1''
1978–9	60.01	60.27	64.31	65.94	64.66	61.77	60.88	59.03	58.44	61.30	63.79	62.26	61.89	59.92	55.24
1979–0	62.47	62.54	63.28	63.81	66.58	72.78	81.05	79.63	79.44	78.66	72.80	79.40	71.87	69.53	63.39
1980–1	86.00	87.91	86.18	87.45	87.63	85.57	83.70	81.92	81.55	78.86	78.52	75.48	83.39	80.95	75.70
1981–2	66.84	61.22	61.08	57.91	55.52	58.24	57.70	60.12	62.41	62.82	61.48	N.A.	60.89	58.28	54.13
1982–3	60.76	59.36	58.97	58.57	60.02	60.53	62.09	66.43	65.72	67.31	71.20	70.73	63.47	61.17	56.41
1983–4	70.52	69.29	69.49	70.82	70.44	68.03	68.98	72.56	73.37	77.18	72.74	65.11	70.71	53.62	50.57
1984–5	60.78	58.93	58.95												

Source: Agricultural Marketing Service, U.S.D.A. T.191

Average Spot Prices of U.S. Cotton,[1] $1\frac{1}{16}$ inches—(SLM) at Designated Markets In Cents Per Pound

Yr. Begin. Aug. 1	Atlanta	Augusta	Charleston	Dallas	Fresno	Galveston	Greenville	Greenwood	Houston	Little Rock	Lubbock	Memphis	Montgomery	Phoenix	Average
1978–9	—	62.50	—	58.33	67.66	—	62.09	61.84	59.45	—	58.27	61.68	61.92	61.98	61.58
1979–0	—	73.92	—	66.91	73.76	—	73.24	72.73	—	—	66.43	72.55	72.57	71.98	71.48
1980–1	—	85.21	—	80.65	82.80	—	84.54	84.30	—	—	79.66	83.81	84.28	81.70	82.99
1981–2	—	61.87	—	58.32	61.02	—	61.57	61.34	—	—	57.96	61.00	61.34	59.93	60.48
1982–3	—	—	—	61.62	64.49	—	63.50	63.35	—	—	60.84	63.33	63.50	63.17	63.08
1983–4	—	—	—	70.79	77.02	—	73.28	73.14	—	—	70.35	73.25	72.93	74.13	73.11

[1] Mixed Lots, Net Weight, uncompressed in warehouse. *Source: Agricultural Marketing Service, U.S.D.A.* T.177

Avg. Price[1] Received by Farmers for Upland Cotton in the U.S. In Cents Per Pound

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[1]
1978–9	57.4	56.2	59.6	61.1	59.0	57.0	55.6	53.5	54.7	56.0	58.8	61.9	58.1
1979–0	59.2	57.3	61.2	61.0	59.8	60.9	64.9	62.9	61.0	63.6	62.2	71.5	62.3
1980–1	73.7	73.9	75.3	77.6	80.9	76.6	70.8	71.9	72.7	72.5	71.2	70.4	74.4
1981–2	65.0	58.1	63.2	61.1	51.5	50.3	49.1	50.4	54.3	55.8	58.1	59.9	54.0
1982–3	52.7	56.0	60.9	61.0	57.7	57.0	57.7	62.2	60.4	63.6	62.6	67.1	59.1
1983–4[2]	64.6	62.8	63.1	67.0	66.2	62.7	65.0	70.1	67.2	72.7	68.0	65.9	66.0
1984–5[2]	67.4	64.6	64.6	61.8	55.8	52.1	48.9	52.5					

[1] Weighted average by sales. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.187

Cotton Government Loan Program in the United States

Crop Yr. Beginning Aug.	Acreage		Loan Rate		Supply & Distribution of Gov't Controlled Cotton						
	Prospective Planting Intentions	Harvested	Avg. at Spot[2] Mkts.	Target Price	Stocks—Aug. 1— Gov't. Owned	Loan	Total Stock	Loan Entries	Total Supply	Loan Cotton Repossessed	Total Distribution
	Thousand Acres		¢ Per Lb.		In Thousands of Running Bales						
1980-1	14,843	13,215	48.00	58.40	—	542	542	2,328	2,870	2,218	2,218
1981-2	14,484	13,841	52.46	70.87	—	652	652	6,082	6,734	2,975	2,975
1982-3	12,599	9,734	57.08	71.00	2	3,757	3,759	5,056	8,815	4,049	4,049
1983-4[1]	9,281	7,348	55.00	76.00	334	4,432	4,766	1,782	6,416	5,958	5,958
1984-5[3]	10,759	10,461	55.00	81.00	121	469	590	2,506	3,096	685	685
1985-6[3]	10,957		57.30	81.00							

[1] Preliminary. [2] Strict low middling, 1 1/16" at 10 markets. [3] Estimate. *Source: Department of Agriculture*

T.174

High, Low & Closing Prices of May Cotton Futures at New York In Cents per Pound

Year of Delivery		Year Prior to Delivery Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Delivery Year Jan.	Feb.	Mar.	Apr.	May	Life of Delivery Range
1980	High	67.90	65.70	66.40	68.25	67.00	70.00	69.00	68.90	73.00	76.40	86.00	90.42	90.70	87.40	84.40	90.70
	Low	66.00	64.10	63.00	63.90	64.55	65.90	66.25	66.40	68.20	70.82	73.97	80.70	77.52	79.50	80.90	64.15
	Close	65.65	65.45	64.15	65.60	66.05	69.20	67.70	68.22	71.77	75.95	85.37	86.77	85.12	81.99	83.75	—
1981	High	80.60	77.60	78.42	75.00	85.70	94.50	96.87	93.50	93.12	97.67	96.50	93.70	89.80	89.20	85.20	97.67
	Low	74.50	74.30	74.92	72.80	75.50	81.65	87.00	88.20	86.70	88.40	88.35	86.00	84.75	83.75	80.65	71.00
	Close	77.00	75.05	75.00	74.80	84.80	93.92	90.40	90.20	92.08	95.60	90.90	90.14	86.12	84.00	80.45	—
1982	High	84.90	85.35	83.66	82.50	81.27	79.40	73.80	71.90	70.45	67.40	67.95	67.65	66.75	68.95	68.50	87.50
	Low	82.75	83.20	81.80	78.70	79.10	71.45	68.55	68.30	64.40	63.11	65.55	64.65	64.01	65.40	67.50	63.11
	Close	84.20	83.26	82.90	79.00	79.30	69.15	69.15	69.45	65.29	65.70	67.82	64.94	65.92	68.30	68.43	—
1983	High	74.65	76.75	76.50	77.50	77.50	74.90	72.15	69.25	68.15	68.90	68.40	71.25	76.42	75.30	71.60	77.50
	Low	73.50	74.20	73.74	69.45	74.50	69.50	66.75	65.80	65.81	66.20	66.35	66.26	70.30	70.25	69.77	65.80
	Close	74.53	76.40	73.30	76.60	74.66	69.90	67.25	67.42	66.62	67.41	67.33	71.20	75.32	71.08	71.03	—
1984	High	74.60	75.50	80.00	83.40	82.70	83.80	83.40	82.15	83.80	82.05	78.25	78.79	81.85	82.54	84.40	84.40
	Low	70.60	73.25	73.20	79.25	78.20	80.30	78.15	78.70	80.31	78.35	74.75	74.05	77.70	77.90	81.50	66.75
	Close	73.80	73.80	80.00	80.00	81.00	82.80	79.30	81.65	80.98	78.42	77.13	78.09	81.74	82.39	82.39	—
1985	High	81.85	78.00	79.25	79.15	75.25	71.80	69.00	72.05	71.30	67.66	68.20	66.85	68.25			
	Low	77.70	75.80	77.45	75.00	69.60	68.74	67.60	67.36	66.45	66.20	65.70	63.28	63.26			
	Close	81.74	78.00	78.60	75.00	69.75	69.15	68.00	69.85	66.95	66.95	65.76	64.18	67.60			
1986	High	67.55															
	Low	66.35															
	Close	67.55															

Source: N.Y. Cotton Exchange

T.184

Month End Open Interest of Cotton Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1980	54,046	57,891	44,363	38,596	31,753	27,276	39,711	46,814	49,370	45,433	40,208	38,022
1981	32,078	34,782	25,882	24,108	26,793	27,286	26,009	30,014	32,121	31,671	29,157	28,584
1982	30,296	31,740	30,230	31,422	27,665	24,675	24,978	25,052	27,047	26,070	26,949	26,581
1983	29,544	34,165	36,109	33,990	35,026	33,851	31,402	33,981	31,531	29,272	30,868	30,758
1984	32,246	28,060	34,212	29,596	30,569	22,239	21,734	21,576	20,419	22,547	19,211	16,614
1985	19,790	17,660	18,835									

Source: N.Y. Cotton Exchange

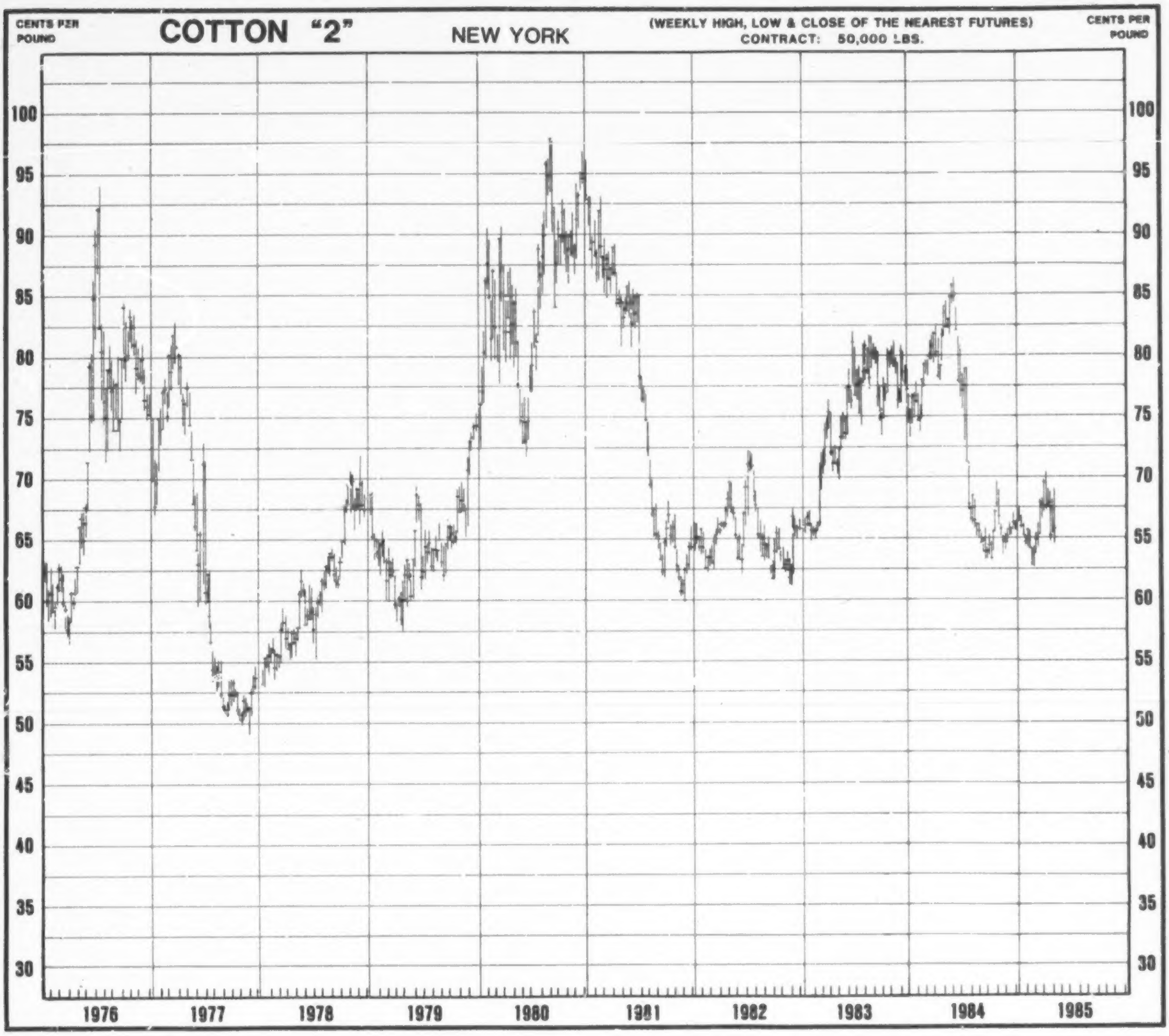
T.182

Volume of Trading of Cotton Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1980	286,058	278,901	290,133	206,682	191,067	128,393	175,619	188,542	224,323	186,615	173,081	173,133	2,523,447
1981	156,303	166,292	150,297	117,653	90,157	117,249	99,175	95,312	96,956	120,301	115,833	89,985	1,415,213
1982	100,242	104,444	103,697	106,892	95,597	151,068	116,211	99,674	101,119	94,265	98,597	83,988	1,255,202
1983	97,947	123,620	139,032	132,447	139,953	153,932	143,116	156,680	121,972	113,759	137,472	90,187	1,550,117
1984	124,735	133,891	127,448	126,780	139,988	111,050	71,522	51,941	39,519	83,631	86,729	39,907	1,137,141
1985	61,860	57,034	61,791										

Source: N.Y. Cotton Exchange

T.183



United States Government Crop Forecasts and Actual Cotton Crops

Year	Forecasts of Production (1,000 Bales of 480 Lbs.[1]) Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Actual Crop	Forecasts of Yields (In Lbs. Per Harv. Acre) Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Actual Yield
1974	12,758	13,200	12,813	12,053	11,702	11,540	470	470	470	443	443	442
1975	9,416	9,309	9,059	9,034	8,476	8,302	484	479	467	466	437	453
1976	10,734	10,375	10,251	9,891	10,264	10,581	466	451	445	435	451	465
1977	13,535	13,302	13,317	13,832	14,496	14,389	506	495	500	503	525	520
1978	11,820	11,155	10,873	10,981	10,841	10,856	462	425	429	418	421	420
1979	13,710	14,245	14,356	14,544	14,527	14,629	497	525	528	535	534	547
1980	12,812	11,689	11,589	11,224	11,125	11,122	461	421	419	408	411	404
1981	14,789	15,507	15,476	15,560	15,733	15,646	515	540	540	543	546	543
1982	11,143	11,029	11,365	11,947	12,102	11,963	563	569	587	605	613	590
1983	7,810	7,776	7,550	7,497	7,725	7,771	503	501	487	504	506	508
1984	12,569	13,276	13,272	13,271	13,292		583	615	620	613	610	

[1] Net Weight bales. *Source: Crop Reporting Board, U.S.D.A.* T.175

United States Cotton Ginnings

Crop Year	Ginnings to: (In Thousands of Running Bales) Aug. 1	Aug. 16	Sept. 1	Sept. 16	Oct. 1	Oct. 15	Nov. 1	Nov. 15	Dec. 1	Dec. 15	Jan. 1	Jan. 15	Feb. 1	Total Crop
1978–9	144	N.A.	672	788	1,490	2,904	4,659	5,890	6,668	8,096	9,317	9,723	10,049	10,549
1979–0	72	N.A.	539	697	916	2,105	4,799	7,287	9,937	11,772	12,728	13,439	13,832	14,262
1980–1	200	N.A.	582	745	1,312	2,566	4,600	6,698	7,841	8,808	9,873	10,430	10,676	10,826
1981–2	44	N.A.	427	645	1,725	3,299	5,541	7,688	10,156	12,023	13,460	14,276	14,778	15,150
1982–3	40	N.A.	453	578	1,529	2,660	5,288	7,202	8,823	9,627	10,574	10,974	11,300	11,526
1983–4[1]	2	N.A.	315	397	763	1,748	3,348	4,638	6,003	6,880	7,209	7,389	7,476	7,504
1984–5[1]	163	N.A.	636	751	1,179	2,371	4,324	7,047	8,979	10,465	11,082	11,687	12,324	12,545

[1] Preliminary. *Source: Bureau of Census*

T.171

United States Production of Cotton (Lint) & American-Pima In Thousands of 480 Pound Net Weight Bales

Year	Upland Alabama	Arizona	Arkansas	California	Georgia	Louisiana	Mississippi	Missouri	No. Car.	Oklahoma	So. Car.	Tennessee	Texas	New Mexico	Total Amer. Pima
1978	291	1,068	660	1,940	111	478	1,378	188	45	355	115	235	3,792	101	93.4
1979	324	1,280	606	3,408	152	690	1,437	157	43	522	116	171	5,515	104	98.6
1980	275	1,354	444	3,109	86	460	1,143	177	52	205	77	200	3,320	107	104.2
1981	422	1,556	604	3,535	159	742	1,565	168	95	440	164	315	5,663	141	79.6
1982	460	1,095	534	3,073	235	870	1,760	204	102	238	155	339	2,700	78	98.7
1983	183	725	323	1,971	112	532	900	73	43	145	53	151	2,380	70	94.7
1984[1]	451	1,080	600	2,920	280	1,045	1,650	195	120	195	170	340	4,000	98	119.0

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

T.176

Gross Entries of Cotton into U.S. Government Loan Program In Thousands of Running Bales

Crop Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May[1]	June[1]	July[1]	Seasonal Total
1978–9	0	5	26	89	215	584	352	189	68	16	14	[2]	1,560
1979–0	0	[2]	23	294	319	600	316	110	51	35	8	[2]	1,759
1980–1	0	[2]	8	253	528	912	343	204	36	28	16	[2]	2,328
1981–2	0	9	132	293	1,081	2,796	1,120	473	117	39	21	2	6,083
1982–3	0	46	143	674	1,857	1,590	4,503	4,160	43	23	13	3	5,062
1983–4	0	0	165	227	253	513	188	264	127	9	32	5	1,765
1984–5	0	1	11	98	673	1,449	2,506						

NOTE: Seasonal totals are net, due to allowances for rejections. [1] Entries after April 30 represent late reporting. [2] Less than one thousand bales. *Sources: N.Y. Cotton Exchange; Commodity Credit Corporation*

T.178

Average Wholesale Price of Cotton Yarn[1] (30/1, Combed, Knitting) on Cones Index 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	153.2	155.2	157.5	158.1	160.1	162.7	163.7	163.7	163.7	165.0	165.0	165.6	161.1
1979	165.6	166.3	165.6	165.6	165.9	166.9	166.9	167.3	167.9	169.9	172.8	176.3	168.1
1980	180.6	198.3	200.0	203.0	204.6	202.7	203.3	206.3	206.3	207.6	210.6	211.6	202.9
1981	212.9	214.6	214.6	212.6	211.9	211.9	210.3	207.0	203.0	199.0	196.7	192.1	207.2
1982	244.0	243.6	242.8	242.2	242.7	240.3	240.4	240.1	239.0	237.4	237.1	236.4	240.0
1983	234.8	234.1	234.2	236.1	236.1	236.7	237.5	239.7	241.5	242.6	243.6	244.3	238.4
1984	244.9	246.2	246.7	248.2	248.1	247.8	248.0	244.9	243.1	241.9	240.9	240.1	245.1

[1] Natural stock, f.o.b. mill. *Source: Bureau of Labor Statistics* (0326-01)

T.181

U.S. Daily Rate of Total Cotton Mill Consumption on Cotton-System Spinning Spindles[2] In Running Bales

Crop Yr.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1978–9	22,941	22,780	24,090	23,809	21,735	24,114	23,567	25,306	23,358	24,193	24,454	20,127	23,373
1979–0	23,617	24,177	25,188	24,099	21,313	24,160	25,353	25,654	24,899	24,781	23,883	18,473	23,836
1980–1	22,130	22,816	23,884	22,885	19,000	21,773	22,312	21,544	21,741	22,060	21,260	19,250	26,066
1981–2	21,448	20,679	22,420	20,138	15,985	18,898	19,885	19,720	20,476	19,580	18,382	15,980	19,466
1982–3	19,295	18,954	20,794	19,526	17,009	20,211	21,505	21,966	21,525	22,042	21,739	18,444	20,251
1983–4	22,625	22,392	22,935	22,318	18,727	23,716	22,378	21,902	21,521	22,087	20,140	17,716	21,538
1984–5[1]	20,776	19,752	20,771	18,846	16,291	19,462							

[1] Preliminary. [2] Not seasonally adjusted. *Source: Bureau of the Census; U.S.D.C.*

T.180

COTTON

Exports of American Cotton from the United States In Thousands of Running Bales

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1973–4	329	266	259	257	592	545	598	778	638	561	496	426	5,745
1974–5	261	125	121	272	350	409	380	346	371	364	392	356	3,746
1975–6	325	258	226	176	237	214	141	381	302	327	315	276	3,176
1976–7	274	342	217	265	376	354	509	536	548	400	462	282	4,564
1977–8	181	200	149	333	496	521	502	704	640	510	528	456	5,218
1978–9	524	388	283	355	464	517	577	574	602	542	614	410	5,849
1979–0	463	428	390	630	902	737	1,025	1,150	916	911	686	540	8,778
1980–1	402	393	237	436	541	669	2,352	733	498	458	320	264	7,303
1981–2	990	261	262	478	737	653	754	873	676	484	498	396	7,062
1982–3[1]	342	351	293	382	377	438	368	487	612	464	831	409	5,354
1983–4[1]	383	322	261	441	632	663	719	896	723	607	422	365	6,434
1984–5[1]	452	264	292	484	627								

[1] Preliminary *Source: Foreign Agricultural Service, U.S.D.A.* T.185

U.S. Exports of American Cotton to Countries of Destination In Thousands of 480 lb. Bales

Yr. Beg. Aug. 1	Bangladesh	Canada	Hong Kong	France	W. Germany	India	Italy	Japan	Netherlands	Spain	Sweden	United Kingdom	Rep. of Korea	P.R. China	Taiwan	World Total
1973–4	98	258	356	81	101	0	124	1,312	17	35	40	57	722	(360)	542	5,746
1974–5	51	186	73	65	52	0	97	957	19	58	34	33	628	9	384	3,746
1975–6	142	131	126	23	11	—	53	646	3	17	21	10	893	0	498	3,178
1976–7	122	187	358	45	36	273	85	973	12	86	17	66	913	0	436	4,565
1977–8	46	214	479	80	65	1	77	1,028	21	64	21	59	1,172	443	490	5,219
1978–9	116	222	427	63	96	1	146	1,342	18	65	23	72	1,278	648	454	6,180
1979–0	71	272	636	92	204	0	185	1,588	11	131	21	72	1,484	2,268	728	9,229
1980–1	33	267	205	42	112	—	54	1,139	1	60	10	38	1,303	1,375	351	5,926
1981–2	50	167	243	58	119	—	106	1,626	2	57	17	43	1,412	848	777	6,567
1982–3	88	238	158	45	163	0	105	1,286	7	72	23	50	1,322	20	378	5,207
1983–4[1]	135	227	283	154	195	—	252	1,709	6	114	28	67	1,269	12	495	6,786
1984–5[2]																6,065

[1] Preliminary. [2] Estimate. *Source: Bureau of the Census* T.189

U.S. Exports of Cotton Cloth (Raw Cotton Equivalent) In Thousands of Bales (Net Weight—480 Lbs.)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	32.3	30.2	38.3	38.0	38.8	37.9	35.4	33.9	42.5	43.8	44.8	43.3	459.4
1974	44.1	43.6	52.9	51.0	51.5	51.2	44.2	36.7	39.3	41.4	39.4	36.2	531.5
1975	36.9	36.0	43.8	43.8	37.5	37.5	34.3	38.1	41.0	49.8	41.6	39.9	488.3
1976	42.8	41.6	54.6	48.0	41.1	47.8	39.0	39.0	45.8	57.5	45.6	53.2	556.0
1977	42.8	51.6	47.1	47.2	36.9	36.5	29.4	31.0	40.2	24.8	26.3	46.3	460.1
1978	32.2	35.2	37.1	35.2	34.5	33.0	31.4	35.9	37.9	44.8	50.1	50.4	457.9
1979	45.6	45.4	56.7	44.1	50.5	57.0	46.2	47.1	55.8	59.0	62.3	58.1	627.7
1980	50.6	54.2	52.4	45.2	42.4	47.2	34.6	44.3	48.0	42.0	38.4	40.9	540.2
1981	34.8	28.2	35.8	35.7	30.9	30.8	21.7	25.9	25.8	27.5	26.6	21.9	345.6
1982	18.2	18.6	20.4	20.6	24.3	24.8	22.7	15.7	18.4	20.7	18.4	16.4	239.2
1983[1]	20.1	15.1	18.2	17.2	14.2	15.9	12.7	14.0	15.4	16.0	15.3	14.8	188.8
1984[1]	14.2	12.3	13.6	13.4	14.2	16.9	13.5	12.8	15.7	16.7	14.1		

[1] Preliminary. *Source: Bureau of the Census* T.193

Raw Cotton Equivalent of U.S. Imports for Consumption of Cotton Manufactures

Year and month	Yarn, thread, and woven fabric						Primarily manufactured products			
			Woven fabric		Total					
	Yarn	Sewing thread, crochet, knitting yarn	100 percent cotton	Blends[1]	Weight	Bales	Pile fabrics and mfrs.[2]	Table damask and mfrs.	Bed clothes and towels[3]	Gloves, hosiery, and hdkf.
	1,000 pounds					*1,000 bales*[8]	*1,000 pounds*			
1982	27,264	1,244	218,619	41,518	288,645	601.3	6,342	481	64,060	22,652
1983	40,881	1,250	274,467	64,108	380,706	793.1	7,721	438	70,067	25,383
1984										
January	6,443	72	31,243	9,852	47,610		787	25	9,305	2,529
February	6,455	168	31,420	8,284	46,327		870	53	10,015	2,236
March	5,717	223	34,604	8,472	49,016		871	38	9,251	2,261
April	6,221	159	31,194	9,407	46,981		965	32	10,296	2,070
May	5,297	185	25,734	6,736	37,952		877	22	7,746	1,692
June	4,015	109	34,633	8,729	47,486		1,292	31	7,224	2,151
July	5,478	213	32,802	10,342	48,835		1,796	28	10,557	3,309
August	3,605	117	33,010	7,089	43,821		1,209	41	8,992	2,281
September	2,779	152	29,380	6,144	38,455		947	34	7,795	3,168

Year and month	Primarily manufactured products							Total	
						Total			
	Other wearing apparel[4]	Lace fabric and articles[5]	Household and clothing articles[6]	Misc.-products[7]	Floor covering	Weight	Bales	Weight	Bales
	1,000 pounds						*1,000 bales*[8]	*1,000 pounds*	*1,000 bales*[8]
1982	487,867	4,046	10,628	[9]10,053	2,408	[9]608,537	1,267.8	[9]897,182	1,869.2
1983	597,423	5,957	11,855	[9]14,335	7,526	[9]740,631	1,543.0	[9]1,121,337	2,336.1
1984									
January	57,114	859	1,779	1,106	1,137	74,641		122,251	254.7
February	65,701	663	1,452	1,693	1,125	83,808		130,135	271.1
March	66,964	689	1,356	1,829	1,564	84,822		133,838	278.8
April	54,962	872	1,604	1,340	1,264	73,406		120,387	250.8
May	54,046	904	1,550	1,236	907	68,990		106,942	222.8
June	60,220	554	1,227	1,514	749	74,962		122,448	255.1
July	87,790	1,328	1,933	1,765	1,572	110,078		158,913	331.1
August	66,788	872	1,221	1,688	1,622	84,713		128,534	267.8
September	71,222	870	1,767	2,074	1,068	88,945		127,400	265.4

[1] Includes tapestry and upholstery fabrics, tire cord fabrics, and cloths in chief value cotton containing other fibers. [2] Includes velvets and velveteens, corduroys, plushes and chenilles, and manufactures of pile fabrics. [3] Includes blankets, quilts, bedspreads, sheets and pillow cases. [4] Includes knit and woven underwear and outerwear (collars and cuffs, shirts, coats, vests, robes, pajamas, and ornamented wearing apparel). [5] Includes nets and nettings, veils and veilings, edging, embroideries, etc., and lace window curtains. [6] Includes braids (except hat braids) tubing, labels, lacing, wicking, loom harness, table and bureau covers, polishing and dust cloths, fabric with fast edges, cords, and tassels, garters, suspenders and braces, corsets and brassieres etc. [7] Includes belts and belting, fish nets and netting, and coated, filled or waterproof fabrics. [8] 480-pound net weight bales. [9] Does not include quantities in the TSUSA 706 luggage categories. The raw fiber equivalent quantities for May–December 1982 was 6,609 thousand pounds. For January–December 1983 these quantities are 1,271, 1,824, 1,433, 991, 879, 1,362, 1,544, 900, 1,021, 793, 743, and 1,330 thousand pounds, respectively. *Source: U.S. Bureau of the Census.* T.192b

U.S. Upland Cotton—Ginnings, by Staple Length In Thousands Running of Bales

Year beginning August	$\frac{13}{16}$ inch and shorter	$\frac{7}{8}$ and $\frac{29}{32}$ inch	$\frac{15}{16}$ and $\frac{31}{32}$ inch	1 and $1\frac{1}{32}$ inches	$1\frac{1}{16}$ and $1\frac{3}{32}$ inches	$1\frac{1}{8}$ and $1\frac{7}{32}$ inches	$1\frac{3}{16}$ and $1\frac{7}{32}$ inches	$1\frac{1}{4}$ inches and longer	All staple lengths[1]
1977	0	69	2,301	3,058	6,960	1,515	3	3	13,909
1978	1	98	1,309	2,369	5,522	1,012	2	2	10,315
1979	4	150	2,102	2,975	5,806	3,047	8	1	14,093
1980	7	203	1,201	1,834	4,957	2,288	33	[2]	10,523
1981	2	180	2,729	2,824	7,143	2,167	27	1	15,073
1982[1]	2	95	1,351	1,075	4,533	4,360	13	[2]	11,429

[1] Preliminary. [2] Less than 500 bales. *Source: Agricultural Marketing Service, U.S.D.A.* T.179

Raw Cotton Equivalent of U.S. Exports of Domestic Cotton Manufactures

Year and month	Yarn, thread, twine, and woven fabric							Manufactured products			
				Woven fabric		Total		House, furnishings			
	Yarn	Sewing thread, crochet, darning and embroidery cotton	Twine and cordage	Standard constructions and tire cord[1]	Other[2]	Weight	Bales	Knit fabrics	Blankets, spreads, pillow cases, and sheets	Towels	Other[3]
	1,000 pounds						1,000 bales[8]	1,000 pounds			
1982	17,981	11,277	822	71,570	13,186	114,838	239.3	4,720	14,092	6,222	3,241
1983	18,854	11,577	793	51,667	7,747	90,636	188.8	2,434	8,725	5,705	715
1984											
January	748	979	54	4,662	377	6,821		202	461	333	43
February	843	653	28	3,970	414	5,909		272	504	359	61
March	754	613	56	4,515	592	6,530		270	624	283	54
April	1,023	823	48	4,136	421	6,451		294	829	561	62
May	1,038	250	27	5,043	471	6,830		276	835	483	40
June	1,192	502	51	5,810	577	8,132		155	809	356	43
July	888	291	79	4,587	616	6,460		277	805	412	55
August	883	496	73	4,070	611	6,133		280	963	416	44
September	826	1,463	12	4,709	524	7,534		214	641	285	26

	Manufactured Products							Total	
	Wearing apparel					Total			
	Knit[4]	Other[5]	Other household & clothing articles[6]	Floor covering	Industrial products[7]	Weight	Bales	Weight	Bales
	1,000 pounds						1,000 bales[8]	1,000 pounds	1,000 bales[8]
1982	34,713	45,321	15,918		14,277	138,506	288.6	253,342	527.8
1983	27,957	44,113	13,736	13,986	11,601	128,977	268.7	219,614	457.5
1984									
January	2,241	3,531	935	1,223	1,000	9,970		16,791	35.0
February	2,256	3,704	1,117	1,060	695	10,018		15,927	33.2
March	2,692	4,673	1,260	965	1,093	11,914		18,444	38.4
April	2,028	3,360	1,123	1,090	1,073	10,419		16,870	35.1
May	2,162	4,011	1,073	1,363	1,620	11,863		18,693	38.9
June	2,064	4,454	1,576	732	1,708	11,897		20,029	41.7
July	1,804	3,756	1,044	703	1,253	10,109		16,569	34.5
August	1,893	3,154	879	593	1,339	9,561		15,694	32.7
September	2,054	2,946	1,389	475	1,115	9,144		16,678	34.7

[1] Includes fabrics, tire cord and cloth for export to the Philippines to be embroidered and otherwise manufactured and returned to the United States. [2] Includes tapestry and upholstery fabrics, table damask, pile fabrics and remnants. [3] Includes curtains and draperies, house furnishings not elsewhere specified. [4] Includes gloves and mitts of woven fabric. [5] Includes underwear and outerwear of woven fabric, handkerchiefs, and wearing apparel containing mixed fibers (corsets, brassieres, and girdles, garters, armbands and suspenders, neckties and cravats). [6] Includes canvas articles and manufactures, braids and narrow fabrics, elastic webbing, waterproof garments, and laces and lace articles. [7] Includes rubberized fabrics, bags, and industrial belt and belting. [8] 480-pound net weight bales. *Source: U.S. Bureau of the Census.* T.192a

Cotton Cloth[1] Production in the United States In Millions of Linear Yards

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year	Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
1974	1,322	1,279	1,127	985	4,714	1980	1,226	1,182	987	1,062	4,456
1975	902	978	1,051	1,164	4,095	1981	980	974	956	1,002	3,856
1976	1,268	1,221	1,099	1,129	4,718	1982[2]	966	961	942	992	3,779
1977	1,207	1,145	982	1,023	4,356	1983[2]	1,046	1,042	1,038	1,040	4,166
1978	1,056	1,019	912	1,020	4,007	1984[2]	1,092	1,028	921		
1979	1,018	998	914	927	3,858	1985					

[1] Cotton broadwoven goods over 12 inches in width. [2] Preliminary. *Source: Bureau of the Census* T.192

Cottonseed and Products *(See feature article on page 21T)*

World production of cottonseed for 1984/85 was estimated by the USDA in March 1985 at a record 34.1 million tons, up 25 percent from 1983/84. Production in China, now the major producing country, was up 31 percent from year-earlier levels, mostly due to favorable weather during the season that led to record yields. Production in Pakistan was estimated at a record 1.9 million tons, a sharp 90% increase over 1983/84 levels. Pakistan's higher projected average yields were also attributable to favorable weather and to improved pest control measures.

Due to large government acreage reduction programs in effect after 1982/83, cottonseed prices have risen relative to soybean prices, which has limited cottonseed meal use to feeding uses, especially in West Coast dairy areas of the U.S. Cottonseed fundamentals generally follow the fundamentals of the soybean market.

Cottonseed meal production in the U.S. was forecast at 1.75 million tons in the 1984/85 season. Domestic disappearance was projected at 1.74 million tons.

According to the respected trade publication, *Oil World*, world exports of cottonseed oil in the Jan.–Dec. 1984 season were estimated at 171,300 tonnes compared with 194,800 tonnes in the previous season. Shipments to Venezuela were expected to account for over 46 percent of world shipments, and shipments to Egypt were expected to account for 29 percent.

World Production of Cottonseed In Thousands of Metric Tons

Crop Year	Sudan	Argentina	Brazil	China[2]	Egypt	India	Mexico	Pakistan	Peru	Turkey	South Africa	USSR	United States	World Total
1979–0	215	330	951	4,414	792	2,643	560	1,436	160	762	128	4,510	5,242	25,121
1980–1	192	315	1,057	5,414	844	2,700	590	1,422	151	800	116	5,082	4,056	25,580
1981–2	306	170	1,133	5,936	805	2,800	525	1,497	130	780	72	5,279	5,803	28,172
1982–3[1]	421	290	1,164	7,196	769	2,670	313	1,648	60	782	53	5,094	4,304	27,370
1983–4[1]	438	220	1,007	9,275	651	2,600	377	1,021	100	835	73	4,600	2,790	27,196
1984–5[3]	435	294	1,491	12,150	615	2,700	450	1,940	130	948	100	4,680	4,810	34,125

[1] Preliminary. [2] Including Manchuria. [3] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.* T.194

Salient Statistics of Cottonseed in the United States

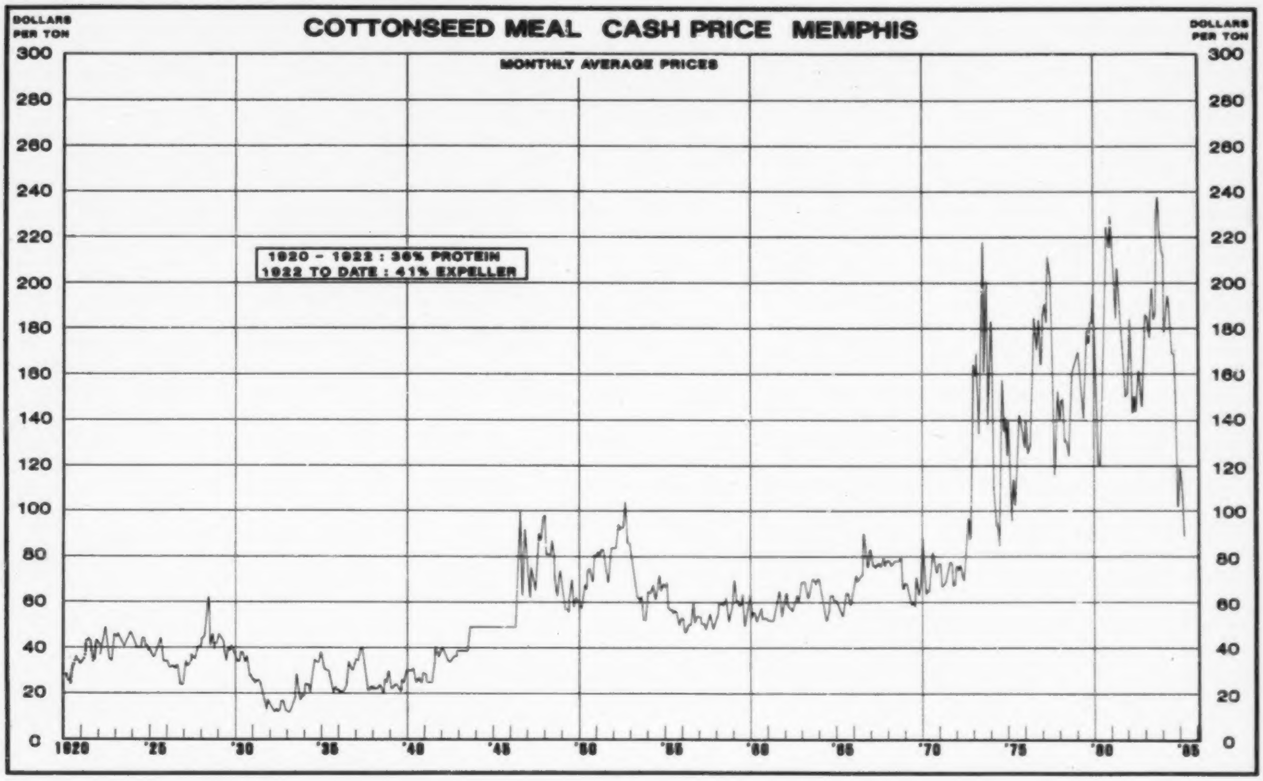
Year Begin. Aug.	Farm Value of Production Mil. $	Exports	Seed for Planting	Residual[2]	Crushings	Products Produced: Oil	Meal	Linters[5]	Hulls	Other[3]	Yield Per Ton Crushed: Oil	Meal	Linters	Hulls	Total Value of Pdt's. $ Per Ton
		— In Thousands of Short Tons —				— In Million Pounds —					— In Pounds —				
1977–8	388.0	41	175	454	4,313	1,386	4,166	1,174	2,152		322	918	172	500	160.89
1978–9	485.6	16	175	247	4,127	1,282	3,770	1,077	2,068						221.00
1979–0	697.6	94	196	725	4,230	1,423	4,098	1,129							194.65
1980–1	574.5	133	— 922—		4,076	1,195	3,580	1,097							
1981–2	549.0	45	—1,394—		4,575	1,551	4,380	1,210							
1982–3[1]	368.2	12	—1,342—		3,800	1,134	3,176								
1983–4[1]	497.0	50	— 699—		2,583	782	2,254								
1984–5[4]		50	— 959—		3,800	1,215	3,492								

[1] Preliminary. [2] Mainly used on farms for feed & fertilizer. [3] Including loss; and also motes, grabbots & hullfibers. [4] Forecast. [5] In THOUSANDS OF RUNNING BALES. *Source. Economic Research Service, U.S.D.A.* T.195

Supply & Distribution of Cottonseed Oil in the United States In Millions of Pounds

Crop Year[3] Beginning Oct.	Production	Imports for Consumption	Stocks Oct. 1	Total Supply	Exports	Shipments to U.S. Terr.	Domestic Disappearance	Per Capita Consumption — in Lbs. —	Utilization — Food Uses: Shortening	Margarine	Salad & Cooking Oils	Other	Total	Nonfood Uses: Foots & Loss	Other	Total
1977	1,453	—	86	1,539	758	.2	696	3.17	174	44	378	—	595	90	8	97
1978	1,282	—	85	1,367	661		620		189	42	446					
1979	1,423	—	86	1,509	728		659		180	27	420					
1980	1,195	—	122	1,317	710		527		132	26	382	14	555			
1981	1,551	—	80	1,631	847		680		167	22	402	12	603			
1982[1]	1,134	—	104	1,240	546		604		142	31	444	16	634			
1983[2]	782	—	90	890	310		540		145	33	374	16	568			
1984[2]	1,215	—	40	1,255	565		620									

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.* T.201



U.S. Consumption of Cottonseed Oil in End Products[1] In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1980-1	65.5	55.6	57.5	51.8	49.5	38.0	44.5	47.1	44.2	50.6	48.0	39.0	591.3
1981-2	43.4	46.5	44.8	58.6	55.0	45.7	40.3	56.8	51.7	56.0	52.5	42.2	593.5
1982-3	54.1	50.4	47.3	56.1	60.0	49.0	53.2	52.0	53.0	56.6	59.1	54.7	645.5
1983-4[2]	54.3	42.4	39.7	46.8	46.9	47.5	55.5	52.1	48.8	57.3	50.1	45.6	587.0
1984-5[2]	43.1	35.5	42.8	55.1	63.5	54.2	58.6						

[1] Includes small amount exported but does not include imported oil. [2] Preliminary. *Source: Bureau of the Census* T.206

U.S. Exports of Cottonseed Oil (Crude & Refined) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1980	34.8	28.1	110.5	71.0	105.0	31.4	70.3	77.6	89.3	53.7	66.6	47.1	785.4
1981	77.0	29.3	66.7	82.1	72.2	85.7	46.9	35.9	46.5	42.2	37.4	80.5	702.3
1982	41.2	146.2	110.6	68.6	74.5	67.0	63.7	47.3	68.4	52.2	60.0	54.7	854.4
1983[1]	41.8	58.8	97.0	25.8	53.0	23.8	42.5	15.5	20.6	10.5	18.4	21.8	429.5
1984[1]	36.4	39.9	31.8	32.9	46.5	12.8	29.9	8.8					

[1] Preliminary. *Source: Dept. of Commerce* T.205

Average Wholesale Price of Cottonseed Meal (41% Solvent[1]) at Memphis In Dollars Per Short Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	167.00	156.25	136.25	120.50	121.00	129.40	157.00	198.40	224.50	215.00	230.00	224.00	173.33
1981	205.60	178.75	185.00	206.90	201.75	190.00	182.50	183.10	166.50	150.00	150.60	179.00	181.64
1982[1]	184.70	159.40	138.00	148.10	143.75	150.00	158.75	161.50	150.00	145.60	161.70	166.25	155.65
1983	169.40	165.60	153.00	173.40	167.50	164.90	186.90	227.00	237.50	245.00	219.20	214.00	232.34
1984	212.60	178.10	187.30	194.10	190.00	177.50	169.30	168.90	151.60	114.90	101.60	119.40	163.78
1985[1]	109.75	105.60											

[1] Prior to 1982, prices are for 41% protein-expeller. *Source: Economic Research Service, U.S.D.A.* T.196

Cottonseed Crushed (Consumption) in the United States In Thousands of Short Tons

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1979–0	258	175	304	394	379	442	388	454	374	388	359	315	4,230
1980–1	330	306	365	426	400	440	378	372	314	278	248	218	4,076
1981–2	191.6	186.2	323.5	455.5	473.3	478.8	446.6	482.3	424.1	426.7	357.1	329.6	4,575
1982–3	290.3	285.8	391.5	481.7	432.6	435.6	368.7	321.7	240.5	214.6	164.2	172.3	3,800
1983–4[1]	166.6	120.7	187.9	301.8	296.6	347.8	289.7	294.7	205.6	173.2	124.3	74.1	2,579
1984–5[1]	70.2	72.6	274.3	423.1	424.2	453.4	392.4						

[1] Preliminary. *Source: Bureau of Census*

T.197

Production of Cottonseed Cake and Meal in the United States In Thousands of Short Tons

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1979–0	119.7	79.3	145.9	183.4	173.0	201.0	178.0	204.0	168.9	181.6	167.8	148.5	1,951
1980–1	152.3	144.0	170.3	202.1	191.1	204.9	176.3	173.4	145.5	130.8	114.2	104.2	1,909
1981–2	88.3	88.7	152.1	220.2	219.0	226.9	206.5	220.3	195.3	195.9	164.4	150.2	2,128
1982–3	129.8	129.3	173.5	219.4	197.3	195.1	167.0	146.7	107.8	97.1	71.4	78.9	1,713
1983–4[1]	78.8	55.3	86.7	144.5	140.9	162.4	134.7	136.2	95.1	76.7	55.9	35.8	1,203
1984–5[1]	32.2	32.6	127.3	198.4	198.7	207.7	179.6						

[1] Preliminary. *Source: Bureau of Census*

T.198

U.S. Production of Crude Cottonseed Oil In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1979–0	85.5	53.5	98.6	126.5	119.9	142.8	125.7	145.1	119.8	125.5	116.8	104.2	1,363
1980–1	104.9	93.1	116.4	130.6	122.3	131.7	118.9	115.4	100.8	88.7	77.4	69.6	1,270
1981–2	62.1	60.9	111.2	153.5	161.8	154.1	145.6	155.9	138.4	140.1	117.5	105.9	1,507
1982–3	92.0	88.8	129.8	157.3	143.3	137.6	117.7	102.6	75.8	69.0	53.1	55.7	1,223
1983–4[1]	54.6	37.1	58.6	94.6	93.6	109.5	91.3	96.6	69.3	55.4	40.1	24.4	825
1984–5[1]	21.7	21.6	84.3	132.5	132.5	141.5	122.1						

[1] Preliminary. *Source: Bureau of Census*

T.199

United States Production of Refined Cottonseed Oil In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1979–0	92.7	56.7	69.6	97.0	103.0	119.1	102.7	118.7	107.5	112.8	203.4	103.5	1,186
1980–1	96.2	94.8	94.1	119.8	125.1	131.3	99.6	102.1	113.0	82.9	79.1	73.7	1,212
1981–2	56.9	53.1	84.7	129.3	144.6	110.2	121.2	135.7	124.9	128.9	121.8	104.8	1,316
1982–3	91.3	76.7	91.5	127.3	124.5	119.2	113.4	103.1	82.6	78.0	60.1	56.5	1,124
1983–4[1]	55.2	39.2	54.6	91.1	97.7	99.7	98.4	100.6	89.1	71.5	43.4	30.5	871
1984–5[1]	25.7	27.8	64.5	121.4	117.6	135.8	117.2						

[1] Preliminary. *Source: Bureau of Census*

T.202

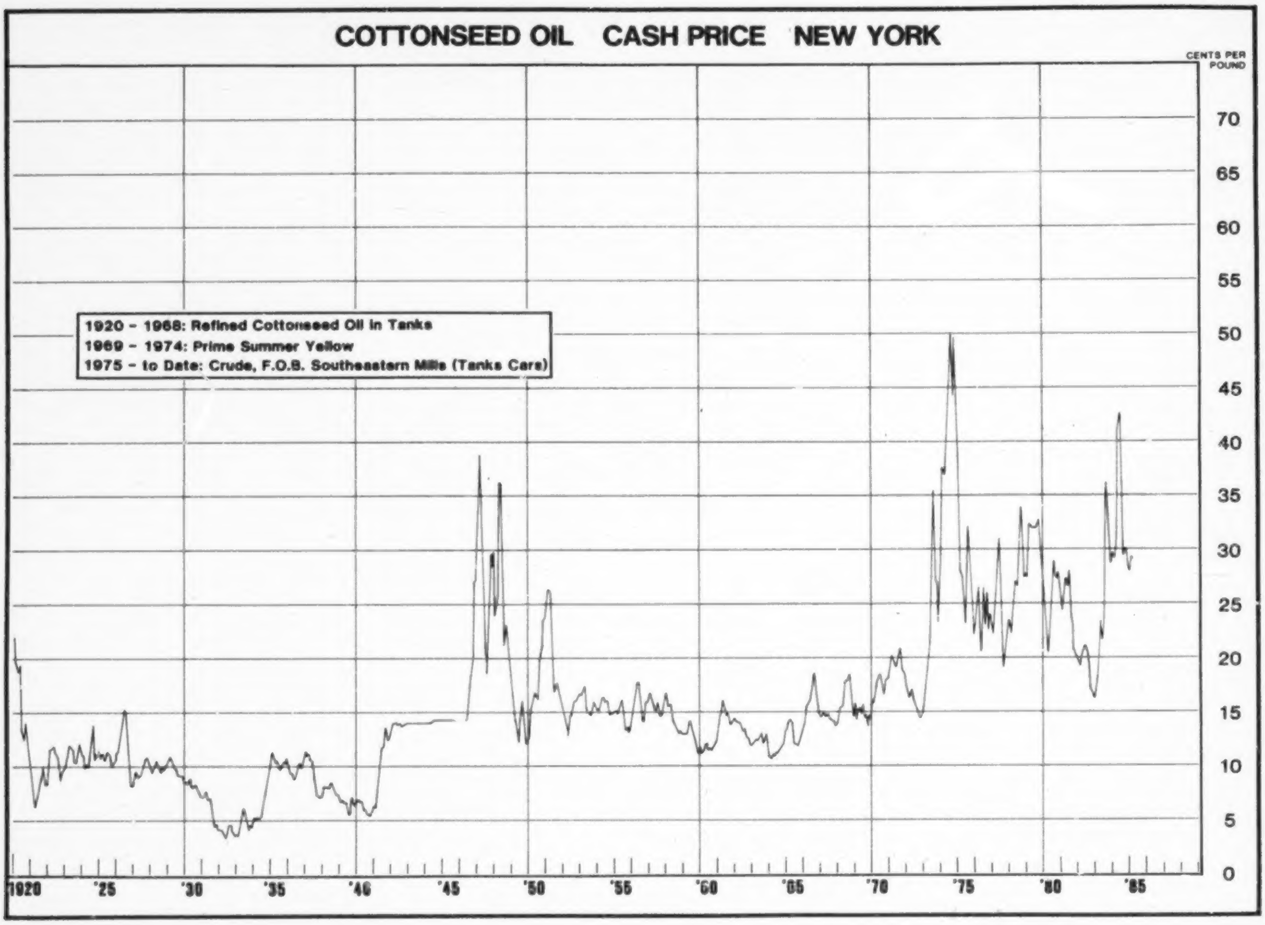
U.S. Stocks of Cottonseed Oil (Crude & Refined) at End of Month In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1979–0	117.2	86.4	93.1	129.0	144.3	173.2	198.9	212.8	188.7	165.8	167.1	144.6
1980–1	138.6	121.9	122.5	152.8	170.1	183.5	200.1	202.4	165.9	160.1	121.7	113.0
1981–2	109.4	80.0	102.6	127.2	133.1	165.7	148.3	152.0	160.1	147.8	144.5	154.1
1982–3	115.2	103.6	121.1	148.9	172.2	175.3	175.1	158.1	164.6	130.4	113.6	108.9
1983–4[1]	96.7	89.6	82.5	108.6	144.6	152.5	152.1	172.6	167.4	131.7	111.5	86.1
1984–5[1]	61.2	49.8	57.6	74.6	79.4	89.6	104.8					

[1] Preliminary. *Source: Bureau of Census*

T.203

COTTONSEED AND PRODUCTS



COTTONSEED OIL CASH PRICE NEW YORK

1920 - 1968: Refined Cottonseed Oil in Tanks
1969 - 1974: Prime Summer Yellow
1975 - to Date: Crude, F.O.B. Southeastern Mills (Tanks Cars)

Average Price of Crude Cottonseed Oil, F.O.B. Southeastern Mills (Tank Cars) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	22.0	23.0	27.0	30.0	31.0	31.0	23.0	22.0	19.0	20.0	20.5	23.5	24.3
1978	23.0	22.3	25.0	25.0	27.0	26.5	27.5	29.0	34.0	28.5	27.3	27.5	26.9
1979	27.3	32.0	32.5	32.0	32.0	32.0	32.0	32.0	32.9	29.7	27.6	26.2	30.7
1980	24.3	23.8	22.4	20.4	20.9	22.3	27.8	29.0	27.5	27.2	27.8	27.0	25.0
1981	25.3	24.2	25.3	27.3	26.7	26.6	27.9	24.6	20.7	20.5	20.4	19.8	24.1
1982	19.9	19.5	19.1	20.4	21.0	21.1	20.9	20.3	18.0	16.9	16.8	16.3	19.2
1983	16.3	17.8	18.3	21.4	23.4	21.6	23.6	33.3	36.2	31.7	29.0	28.7	25.1
1984	29.8	29.1	30.1	31.4	41.1	42.6	36.3	32.7					

Source: Economic Research Service, U.S.D.A. T.204

U.S. Exports of Cottonseed Oil to Important Countries In Thousands of Metric Tons

Crop Year	Canada	Costa Rica	Dom. Rep.	Egypt	W. Germany	Guatemala	India	Iran	Japan	Korea	Netherlands	South Africa	Turkey	United Kingdom	Venezuela	Total
1977–8	4.2	0	7.0	192.8	2.6		0	39.7	26.6	1.1	2.1		0	1.4	43.1	344.1
1978–9	6.0	—	37.6	135.1	1.3		0	40.8	37.3	1.3	4.0		0	2.1	30.2	299.7
1979–0	5.3	1.9	28.4	157.1	—	0	0	—	23.0	1.9	5.2		3.0	.5	72.3	330.2
1980–1	2.5	1.0	33.2	75.6	—	0	27.2	0	40.2	2.5	5.8		—	1.5	109.1	321.9
1981–2	4.3	3.1	27.3	156.2	2.3	9.9	0	0	41.2	3.0	10.2		0	3.5	91.2	384.4
1982–3[1]	4.3	.5	6.6	66.3	3.3	15.3	0	0	34.6	2.5	5.1	1.2	0	1.5	73.8	247.5
1983–4[1]	3.5		4.5	31.2	7.9	1.1			16.7	2.9	2.1	1.8		3.0	55.4	137.4

[1] Preliminary. *Source: U.S. Bureau of the Census* T.202A

Currencies

According to the Department of Commerce, the 1984 U.S. balance of payments deficit, figured on a current account basis, ballooned to a record $101.65 billion (seasonally adjusted) in 1984. This was considerably above the previous yearly high of $41.56 billion in 1983. The deterioration of the 1984 current account, which is the broadest reflection of the state of U.S. trade with respect to the rest of the world, was attributed to a widening of the merchandise trade deficit that, in turn, was influenced by the record-high dollar during the year. Rising short-term interest rates and the appreciation of the dollar led to great inflows of foreign capital to the U.S. in the first half of 1984, an effect that was reduced in the second half of the year as the demand for credit slackened somewhat and interest rates eased.

Foreign currencies futures continued in steep downtrends during 1984 as the dollar was squeezed to record heights by conjecture that the Fed would continue to hold firm in the fight against inflation and by ideas that government borrowing due to the huge federal deficit would eventually come into increasing competition with private credit demands and drive up domestic interest rates. Also, a great deal of flight-to-quality buying of the dollar due to political and military problems around the world was noted during the year.

The U.S., Japan, the Federal Republic of Germany, and United Kingdom, Canada, and Switzerland—all of whose currencies are traded on futures exchanges—are important members of the 24-member Organization for Economic Cooperation and Development (OECD). According to OECD estimates, the rate of inflation in OECD countries tended to moderate in 1984. For the OECD in total, prices increased 5 percent compared with a 5.3 percent increase in 1983 and a more than 11 percent increase in 1980. Total OECD unemployment in 1984 declined to 31 million from the record 32 million in 1983. Overall, the OECD current account deficit rose from about $25 billion in 1983 to $70 billion in 1984.

Japan's economy in 1984 was characterized by a strong expansion, one of the lowest inflation rates in the OECD area, and an exceptionally strong export market. Japan's real GNP was estimated to have expanded at a 5¾ percent rate in 1984 compared with 3 percent in 1983 and an average annual rate of 4.3 percent for the 1972–1982 period. Although the Japanese inflation rate tended to pick up somewhat during 1984, consumer price increases of 2¼ percent were among the lowest in the OECD. Japan's unemployment rate, at 2¾ percent in 1984, was the lowest of the major OECD countries. These factors combined to make yen futures relatively the strongest of the currencies futures in most of 1984.

Although the economic recovery in West Germany had been expected to accelerate sharply in 1984, a prolonged strike in the "engineering industries" disrupted economic activity during the first half of 1984, and real GNP was up only 1.7 percent during that period. Real GNP for all of 1984 rose about 2½ percent. Germany's price level increased at the rate of 2½ percent in 1984, and an increase in prices by 2 percent was expected for 1985. Germany's unemployment rate continued at high levels during 1984, a fact that made West Germany central bankers reluctant to raise interest rates to defend the mark.

The United Kingdom was the only major OECD economy to record slower growth in 1984 compared with the previous year. GNP expansion in 1984 slipped to a 2 percent rate, down significantly from 3.2 pecent in 1983. Prices increased at about a 5 percent rate in 1984. A strike by U.K. coal miners that lasted most of 1984 cost the economy some growth. Yet, the U.K. was the only major European OECD country to record an increase in employment during 1984.

Canada's GNP expanded at a 4¼ percent rate in 1984, making Canada the third strongest economy of the major OECD countries. This fact helped Canadian dollar futures to move in trading range patterns throughout much of the year, even as other major foreign currencies futures were dropping against the strong U.S. dollar. Inflation rates had been dropping sharply in Canada, with consumer prices rising only 4¼ percent in 1984 compared with an increase of nearly 12 percent in 1981. However, the 1984 unemployment rate of 11½ percent in 1984 was little improved from 12 percent in 1983.

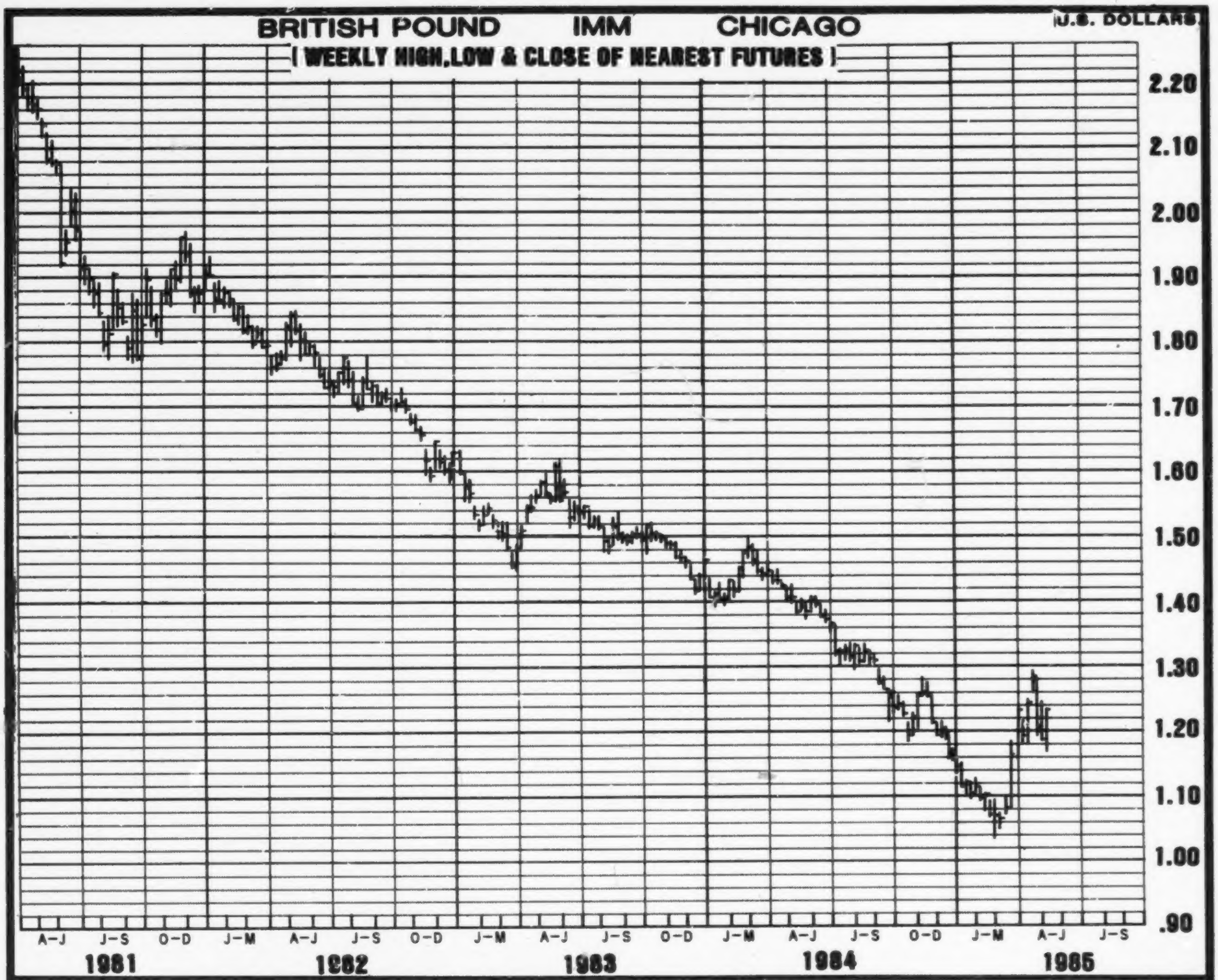
Swiss franc futures were one of the weakest of the currencies futures market during 1984, and it was noted that traders repeatedly sold Swiss franc futures against purchases of other currencies futures in order to take advantage of the relatively high Swiss inflation rate.

During the last of 1984 and into 1985, political concerns grew regarding the acute negative effects of the record-high dollar on the U.S.'s trading partners. Governors of the major central banks of the world, including the Federal Reserve, attempted to "jawbone" the dollar to lower levels, and on a few occasions in late 1984, the central banks sold dollars heavily in concerted efforts to defend other major currencies. By the first weeks of 1985, however, these measures had proven to be largely ineffectual. Then, in March 1985, cracks began to appear in the foundation of the dollar's bullishness when the enforced closing of several thrift institutions in Ohio gave rise to conjecture about the health of the U.S. banking system and to ideas that the Fed would be reluctant to tighten credit as a result.

It was expected that any signs of an easing of Federal Reserve monetary policy would tend to weaken the dollar and bring about sharp rallies in foreign currencies futures during 1985. This, in turn, was thought to depend on the extent to which the U.S. economy is perceived to be "overheating." U.S. consumer prices were expected to increase at a 3½ percent rate in 1985 compared with an overall inflation rate of 3 percent in 1984. The year-to-year increase in the U.S. GNP was expected to increase slightly at a 3 percent rate in the last half of the year vs. an estimated 6¾ percent increase for all of 1984.

Futures Markets

The International Monetary Market (IMM) division of the Chicago Mercantile Exchange lists futures contracts in the British pound, Canadian dollar, Deutschemark, Japanese yen, Swiss franc, Dutch guilder, French franc, and Mexican peso.


BRITISH POUND IMM CHICAGO
(WEEKLY HIGH,LOW & CLOSE OF NEAREST FUTURES)
U.S. DOLLARS
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2.10
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
.90
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
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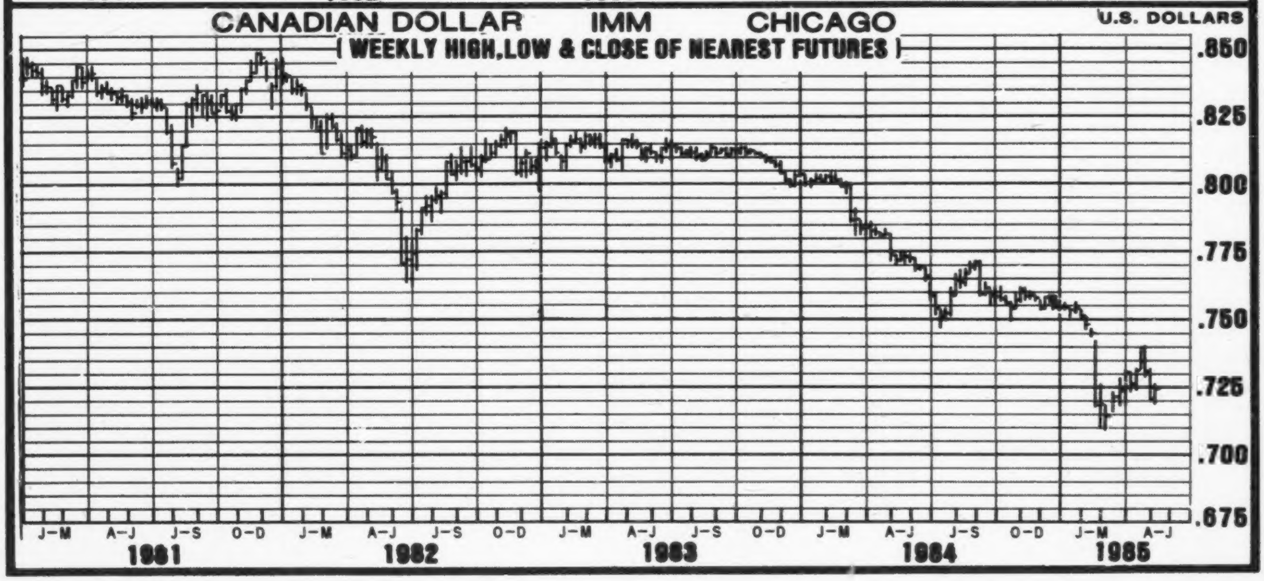
1981
1982
1983
1984
1985


CANADIAN DOLLAR IMM CHICAGO
(WEEKLY HIGH,LOW & CLOSE OF NEAREST FUTURES)
U.S. DOLLARS
.850
.825
.800
.775
.750
.725
.700
.675
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
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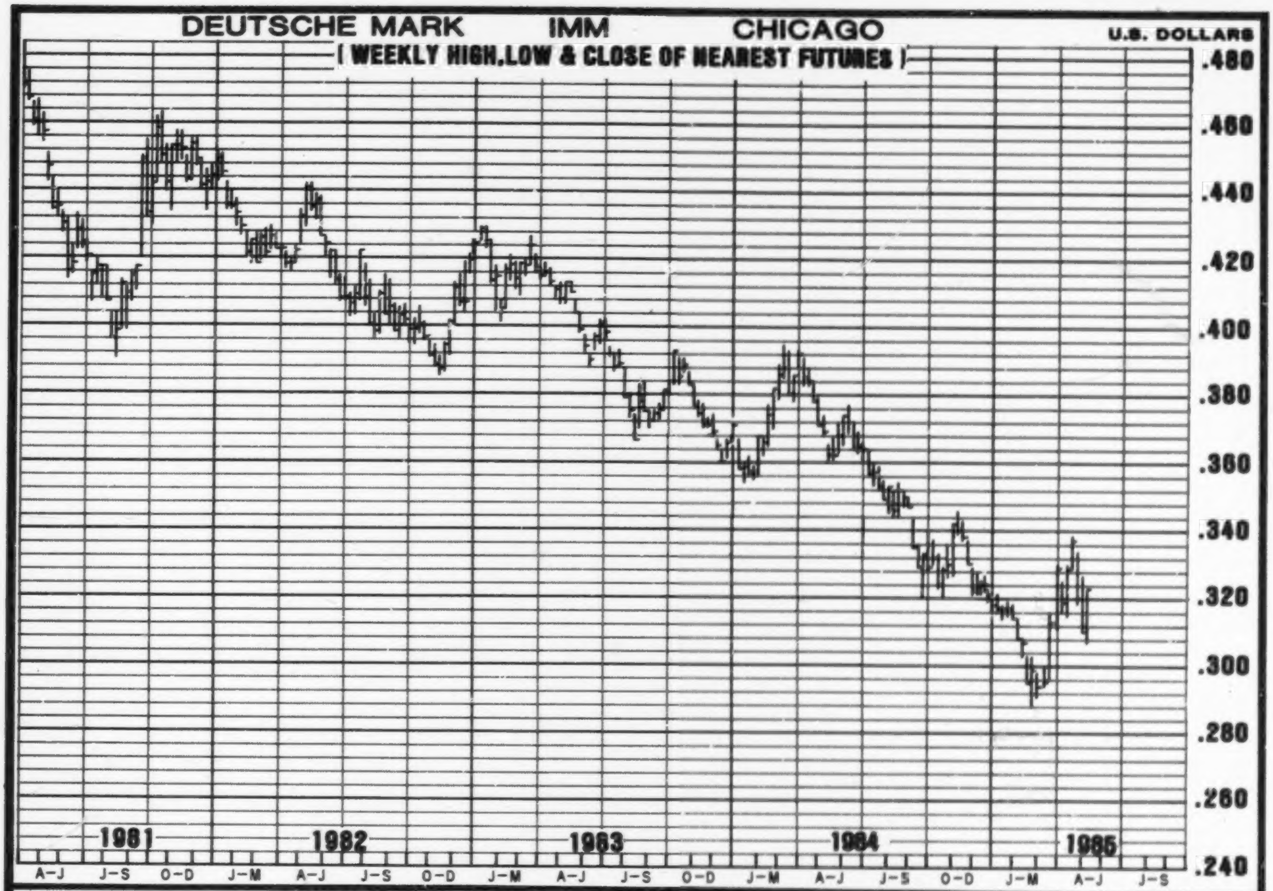
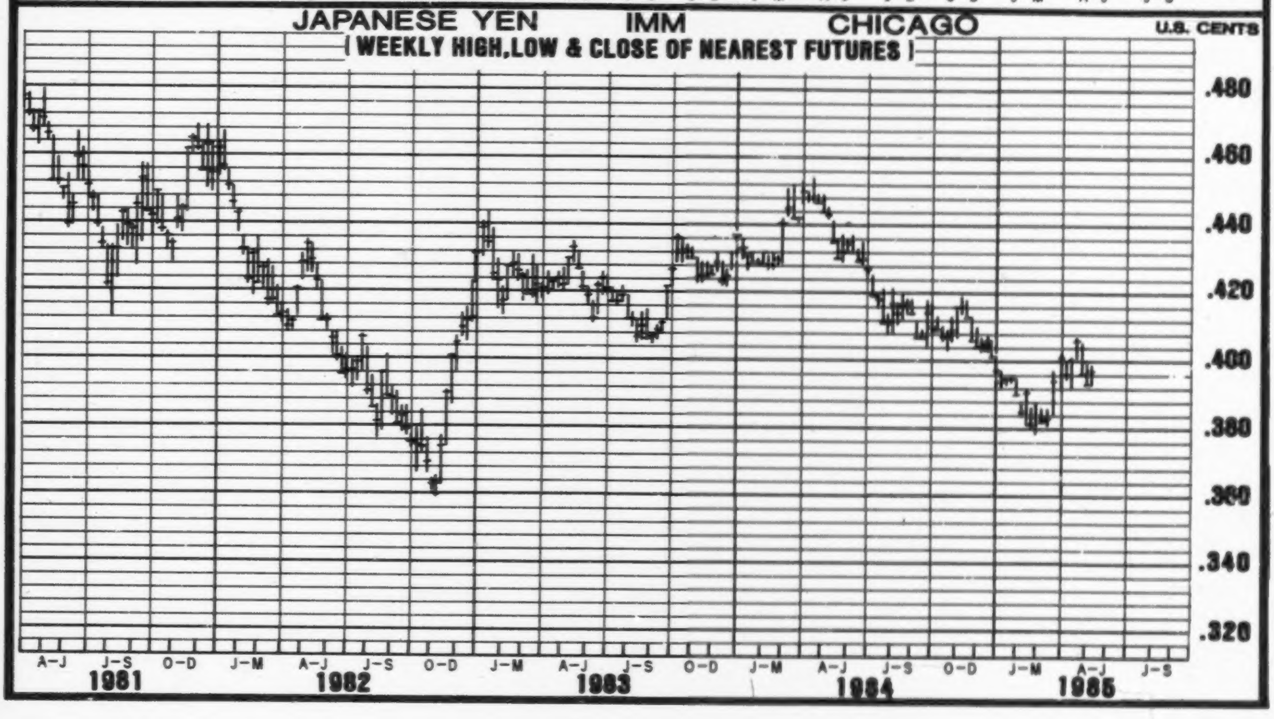
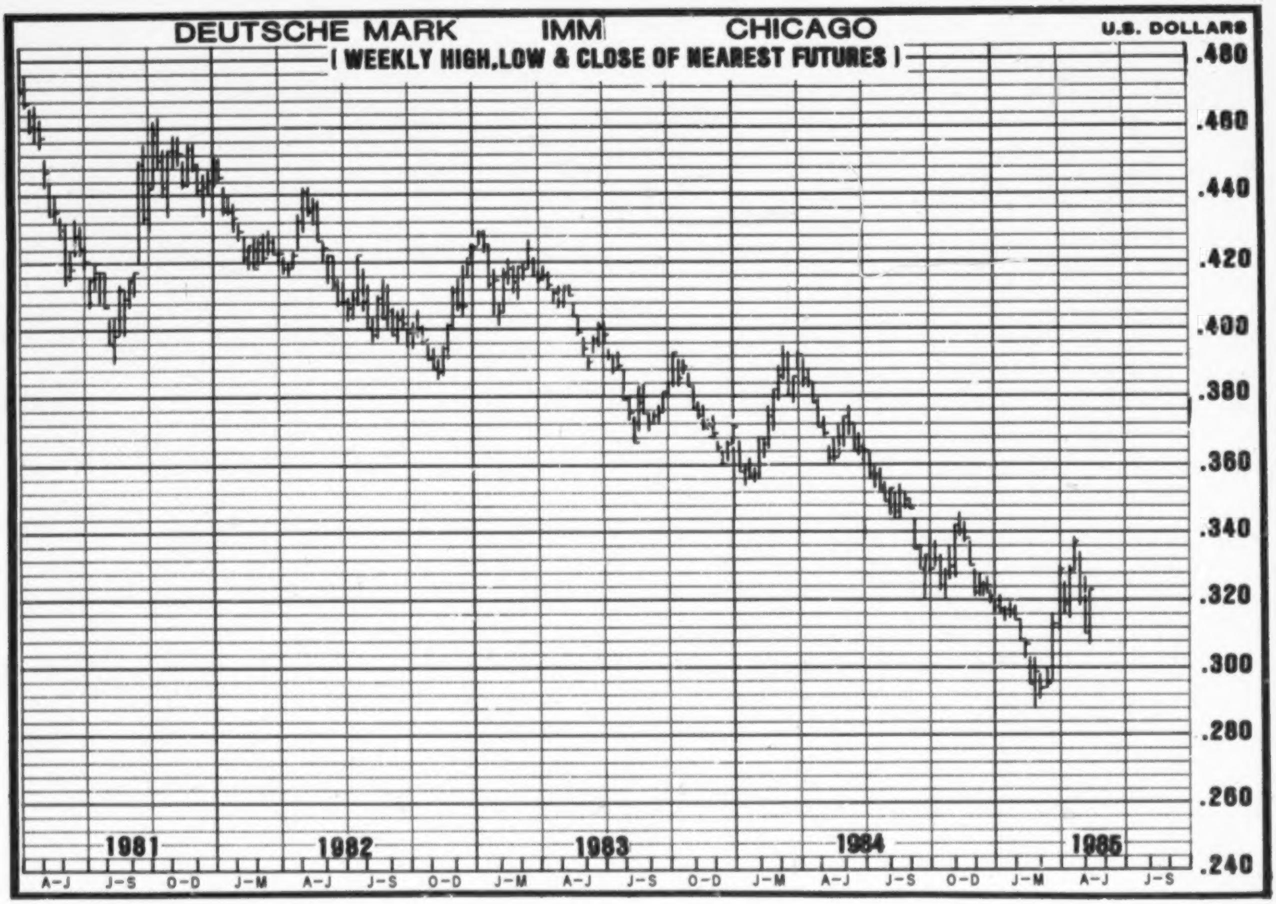
A-J
1981
1982
1983
1984
1985


DEUTSCHE MARK IMM CHICAGO
(WEEKLY HIGH, LOW & CLOSE OF NEAREST FUTURES)
U.S. DOLLARS
.480
.460
.440
.420
.400
.380
.360
.340
.320
.300
.280
.260
.240
1981
1982
1983
1984
1985
A-J
J-S
O-D
J-M


JAPANESE YEN IMM CHICAGO
(WEEKLY HIGH, LOW & CLOSE OF NEAREST FUTURES)
U.S. CENTS
.480
.460
.440
.420
.400
.380
.360
.340
.320
A-J
J-S
O-D
J-M
1981
1982
1983
1984
1985



Source: Economic Research Service, U.S.D.A.

T.0580

Canadian Dollars per U.S. Dollar

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1982	1.192	1.214	1.220	1.230	1.225	1.275	1.268	1.250	1.234	1.229	1.226	1.238	1.233
1983	1.228	1.227	1.226	1.232	1.228	1.232	1.233	1.233	1.232	1.232	1.237	1.247	1.233
1984	1.248	1.248	1.269	1.279	1.294	1.304	1.323	1.303	1.314	1.318	1.316	1.320	1.295

Source: Economic Research Service, U.S.D.A.

T.0581

German Marks per U.S. Dollar

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1982	2.293	2.365	2.379	2.397	2.308	2.430	2.464	2.477	2.502	2.530	2.555	2.419	2.427
1983	2.389	2.428	2.408	2.439	2.465	2.548	2.590	2.673	2.670	2.601	2.682	2.749	2.554
1984	2.810	2.698	2.596	2.647	2.746	2.738	2.848	2.882	3.028	3.066	2.996	3.102	2.847

Source: Economic Research Service, U.S.D.A.

T.0582

Japanese Yen per U.S. Dollar

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1982	224.7	235.1	240.7	244.9	236.5	251.0	255.1	258.8	262.6	271.3	265.1	241.0	248.8
1983	232.5	236.1	238.0	237.6	234.7	240.0	240.4	244.4	242.9	232.3	234.9	234.3	237.4
1984	233.7	233.5	225.2	225.2	230.4	233.4	243.0	242.0	245.3	246.7	243.5	247.8	237.6

Source: Economic Research Service, U.S.D.A.

T.0583

Month End Open Interest of British Pound Futures in Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	11,622	18,839	20,374	17,621	11,478	19,464	12,580	15,022	15,459	15,155	20,083	14,854
1983	20,803	24,311	19,495	24,032	32,900	21,098	22,643	23,505	19,183	18,641	23,105	16,968
1984	20,972	27,563	17,939	20,035	17,876	13,072	15,710	15,105	15,473	18,921	21,701	15,624
1985	22,230	23,911	29,487									

Source: International Monetary Market (Chicago)

T.0584

Month End Open Interest of Canadian Dollar Futures in Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	8,540	11,001	15,770	10,920	16,098	18,895	15,503	17,811	12,434	14,057	17,534	18,033
1983	21,733	15,270	13,594	13,015	11,695	13,608	12,453	10,466	5,764	6,544	6,979	5,131
1984	5,624	5,607	9,572	12,306	10,484	7,684	8,244	8,197	6,397	7,737	10,641	7,775
1985	9,248	12,208	11,132									

Source: International Monetary Market (Chicago)

T.0585

Month End Open Interest of Deutschemark Futures in Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	13,411	12,974	13,824	16,874	13,293	11,917	13,903	14,025	14,600	14,491	22,873	19,792
1983	16,806	16,653	18,195	22,944	25,382	23,269	27,585	23,531	30,077	24,460	23,385	22,804
1984	24,830	38,569	37,871	33,228	34,665	25,166	29,713	34,871	37,068	42,785	44,888	33,746
1985	49,483	45,759	48,190									

Source: International Monetary Market (Chicago)

T.0586

Month End Open Interest of Japanese Yen Futures in Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	11,761	12,880	14,784	18,407	15,405	10,171	18,328	12,289	14,996	13,883	22,627	25,777
1983	26,913	31,388	23,095	31,378	39,661	28,279	32,731	27,510	37,616	36,891	34,976	32,998
1984	28,988	34,456	42,730	30,390	28,035	16,121	18,197	20,172	15,431	21,592	19,828	13,542
1985	13,755	16,206	21,333									

Source: International Monetary Market (Chicago)

T.0587

Month End Open Interest of Swiss Franc Futures in Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	11,493	10,637	14,772	13,318	15,956	12,217	16,935	15,642	15,768	15,793	24,881	25,906
1983	28,628	29,288	22,848	30,877	33,679	26,930	29,997	25,367	31,106	23,808	26,793	21,450
1984	23,067	30,948	25,407	25,118	25,548	18,402	19,093	21,229	18,812	21,485	23,562	17,861
1985	24,406	28,898	22,446									

Source: International Monetary Market (Chicago)

T.0588

CURRENCIES

Index of Trade-Weighted Dollar Exchange Rates for Total Agriculture—April 1971 = 100

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	Nominal		NOT		304.6	318.0	329.2	354.4	384.1	403.2	429.8	454.4	478.4
	Real		AVAILABLE		91.2	91.4	93.0	94.9	97.2	96.5	95.0	96.2	97.3
1984[1]	Nominal	505.7	538.8	580.4	618.9	661.8	710.1	770.3	823.2	899.3	938.9	1,067	1,152
	Real	97.2	96.5	94.4	95.6	97.8	98.0	100.2	100.6	102.9	103.5	102.6	104.3
1985[1]	Nominal	1,282											
	Real	105.9											

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[1] Preliminary. *Nominal* values are percentage changes in currency units per dollar, weighted by proportion of agricultural exports from the United States. An increase indicates that the dollar has appreciated. *Real* values are computed in the same way as the nominal series, adjusted for CPI changes in the countries involved. *Source: Economic Research Service, U.S.D.A.* T.0589

Index of Trade-Weighted Dollar Exchange Rates for Soybeans—April 1971 = 100

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	Nominal		NOT		141.0	140.9	143.7	145.8	149.1	149.3	148.8	152.3	155.3
	Real		AVAILABLE		85.4	85.9	88.2	90.2	92.2	91.9	89.9	91.7	93.4
1984[1]	Nominal	157.5	155.1	152.9	155.0	162.1	162.4	166.8	168.0	172.6	175.6	175.2	180.6
	Real	94.6	92.1	89.3	90.4	93.2	93.4	96.5	97.4	100.7	101.6	99.6	102.2
1985[1]	Nominal	185.1											
	Real	104.0											

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[1] Preliminary. *Nominal* values are percentage changes in currency units per dollar, weighted by proportion of agricultural exports from the United States. An increase indicates that the dollar has appreciated. *Real* values are computed in the same way as the nominal series, adjusted for CPI changes in the countries involved. *Source: Economic Research Service, U.S.D.A.* T.0590

Index of Trade-Weighted Dollar Exchange Rates for Wheat—April 1971 = 100

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	Nominal		NOT		1,003	1,085	1,158	1,290	1,444	1,552	1,713	1,843	1,973
	Real		AVAILABLE		96.9	97.3	98.2	100.0	103.6	102.5	101.5	102.2	102.2
1984[1]	Nominal	2,126	2,334	2,588	2,803	3,018	3,305	3,645	3,958	4,395	4,612	5,378	5,865
	Real	102.7	102.2	101.1	102.3	103.5	104.1	104.4	104.5	105.3	105.1	106.3	106.9
1985[1]	Nominal	6,598											
	Real	108.1											

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[1] Preliminary. *Nominal* values are percentage changes in currency units per dollar, weighted by proportion of agricultural exports from the United States. An increase indicates that the dollar has appreciated. *Real* values are computed in the same way as the nominal series, adjusted for CPI changes in the countries involved. *Source: Economic Research Service, U.S.D.A.* T.0590A

Index of Trade-Weighted Dollar Exchange Rates for Corn—April 1971 = 100

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	Nominal		NOT		308.8	320.9	333.0	354.5	382.1	400.4	424.5	448.3	471.1
	Real		AVAILABLE		89.0	89.2	91.4	94.0	95.9	95.5	93.7	95.3	96.6
1984[1]	Nominal	497.1	526.7	563.2	598.6	640.6	684.1	740.4	789.2	860.0	897.8	1,013	1,093
	Real	97.7	95.4	92.7	93.6	96.5	96.5	99.4	100.3	103.2	104.1	102.3	104.8
1985[1]	Nominal	1,212											
	Real	106.9											

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[1] Preliminary. *Nominal* values are percentage changes in currency units per dollar, weighted by proportion of agricultural exports from the United States. An increase indicates that the dollar has appreciated. *Real* values are computed in the same way as the nominal series, adjusted for CPI changes in the countries involved. *Source: Economic Research Service, U.S.D.A.* T.0591

Index of Trade-Weighted Dollar Exchange Rates for Cotton—April 1971 = 100

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	Nominal		NOT		155.5	155.7	155.9	157.0	158.9	159.9	163.4	180.2	181.4
	Real		AVAILABLE		89.0	88.9	89.9	90.9	91.9	91.7	91.6	92.6	93.3
1984[1]	Nominal	182.5	181.4	180.4	184.0	185.8	187.2	190.3	191.1	195.5	197.0	197.6	207.0
	Real	93.6	92.8	91.6	92.1	93.3	94.2	95.6	96.1	96.9	97.7	97.9	99.0
1985[1]	Nominal	208.8											
	Real	100.0											

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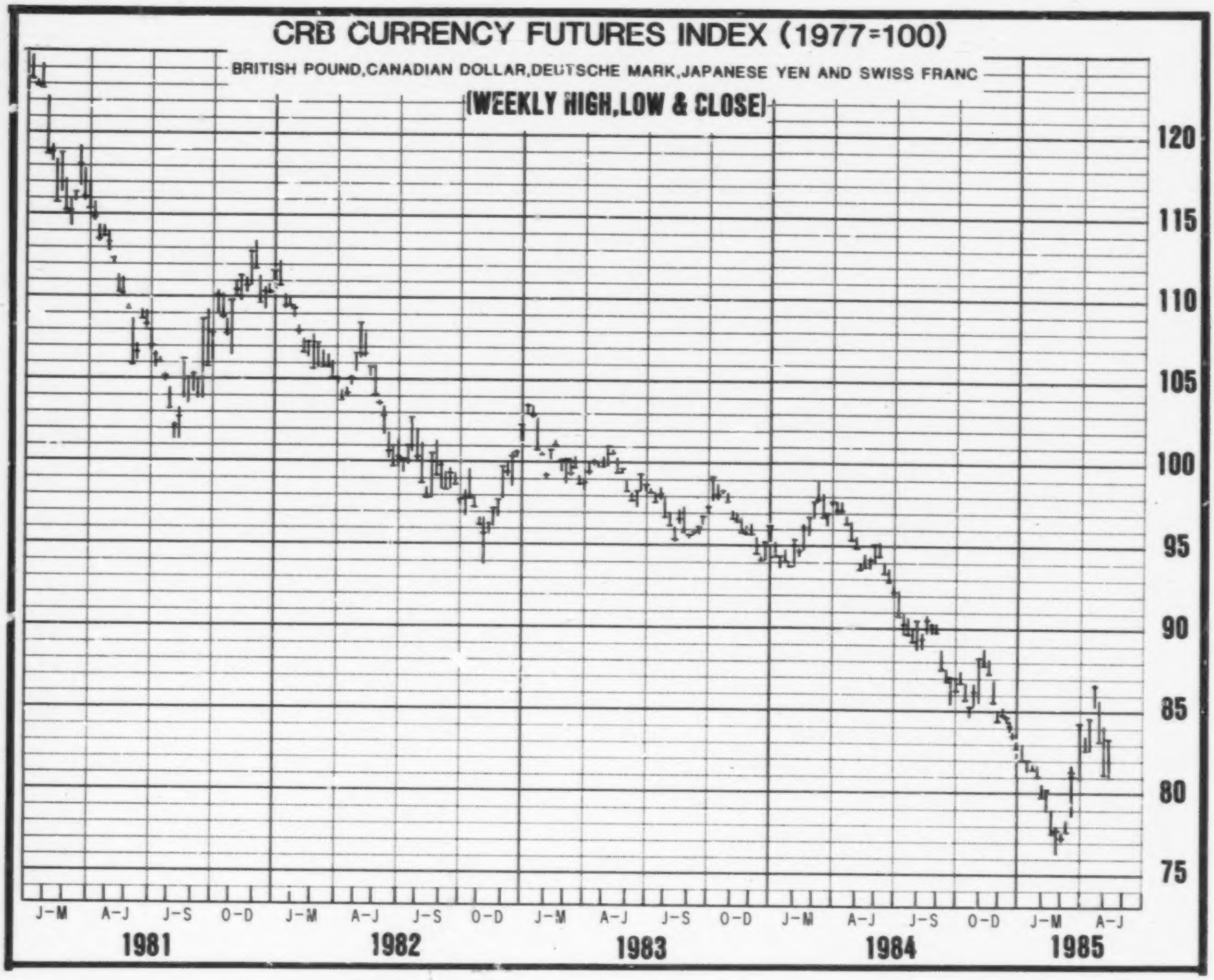
[1] Preliminary. *Nominal* values are percentage changes in currency units per dollar, weighted by proportion of agricultural exports from the United States. An increase indicates that the dollar has appreciated. *Real* values are computed in the same way as the nominal series, adjusted for CPI changes in the countries involved. *Source: Economic Research Service, U.S.D.A.* T.0591A



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Distilled Spirits

Salient Statistics of Distilled Spirits in the United States In Thousands of Gallons[1]

Fiscal Year[4] Ending Sept. 30	Whiskey					All Distilled Spirits				
	Production	Tax-Paid Withdrawals	Imports For Consumption[2]	Stocks End of Period	Bottled For Consumption	Production	Tax-Paid Withdrawals	Imports For Consumption[2]	Stocks End of Period	Bottled For Consumption
1971	127,220	111,972	89,290	960,509	186,050	759,251	256,999	102,140	1,162,398	310,056
1972	126,274	120,794	87,690	958,386	195,819	764,351	281,584	100,160	1,107,557	335,482
1973	111,974	135,937	92,300	926,112	188,245	859,152	282,840	107,280	1,060,634	336,813
1974	92,599	138,105	93,920	875,742	184,296	821,577	292,428	110,980	1,006,206	348,776
1975	49,958	136,950	94,980	779,762	181,683	717,550	295,445	113,460	950,044	356,916
1976	79,178	134,773	92,070	722,884	178,701	667,682	304,491	112,710	873,632	369,346
1977[4]	81,828	125,878	91,150	678,682	165,751	656,128	295,845	112,990	810,948	360,697
1978	79,150[2]	125,977	101,890	624,886	175,970	166,610[2]	321,294	128,600	759,592	443,460[2]
1979	101,260[2]	124,544	95,400	608,060	164,544	186,680[2]	317,764	123,650	670,360	447,520[2]
1980	84,310[2]		86,000	565,610		140,530[2]		113,710	625,830	449,420[2]
1981	96,680[2]		86,530	543,600		152,030[2]		117,930	612,740	449,450[2]
1982[3]	91,250[2]		76,600	539,590		138,080[2]		106,030	604,930	437,660[2]
1983[3]	72,450[2]		83,840	523,000		119,400[2]		116,350	590,450	431,060[2]
1984[5]	77,480[2]		35,190	490,180		120,720[2]		117,860	561,680	395,000[2]

[1] Production, withdrawals, and stocks are tax gallons; imports are proof gallons; consumption are wine gallons. [2] Data are for CALENDAR YEARS. [3] Preliminary. [4] Fiscal year ending JUNE 30 PRIOR TO 1977. *Sources: Internal Revenue Service; Department of Commerce* T.207

Grains Used in Production of Alcohol, Dist. Spirits, & Ferm. Malt Liquors in U.S. In Thousands of Bushels

Year Begin. July 1	Corn and Products			Barley and Malt			Wheat				
	Alcohol & Distilled Spirits	Fermented Malt Liquors[3]	Total	Alcohol & Distilled Spirits	Fermented Malt Liquors	Total	Alcohol & Distilled Spirits	Fermented Malt Liquors	Total	Rye[2]	Sorghum Grains
1964–5	27,704	39,467	67,171	6,181	88,692	94,873	68	9	77	3,801	3,493
1965–6	29,830	40,688	70,518	7,064	90,340	97,404	66	8	74	4,393	3,062
1966–7	32,627	40,658	73,285	6,812	96,204	103,016			75	4,663	2,786
1967–8	33,980	40,247	74,227	7,101	97,350	104,451				4,744	2,809
1968–9	33,024	41,537	74,561	6,968	100,956	107,924				4,681	3,372
1969–0	31,202	43,121	74,333	6,669	109,512	116,181				4,279	2,963
1970–1	24,030	45,251	69,281	4,338	108,201	113,039				3,435	3,716
1971–2	24,848	45,441	70,289	4,496	113,209	117,705				3,066	4,750
1972–3	29,498	45,257	74,755	4,193	114,608	118,801					2,025
1973–4[1]	33,095	46,978	80,073	3,659	121,892	125,551					2,515
1974–5											

[1] Preliminary. [2] Used principally for distilled spirits. [3] Principally corn grits & flakes. *Source: Internal Revenue Service* T.209

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Eggs

Egg production increased in each quarter of 1984 as rising numbers of pullets entered the flocks. By the fourth quarter of 1984, the number of hens on farms rose almost 3 percent from the previous year, according to the USDA. With the rate of lay about 1 percent above 1983, egg production in the fourth quarter was 3 percent higher than the 1,419 million dozen produced in that quarter of 1983. The increased production late in 1984 offset lower production early in the year, and total eggs produced during December 1983 through November 1984 were 2 million dozen more than the year earlier. U.S. egg production in calendar year 1984 totalled 5.7 billion dozen, up slightly from production in 1983.

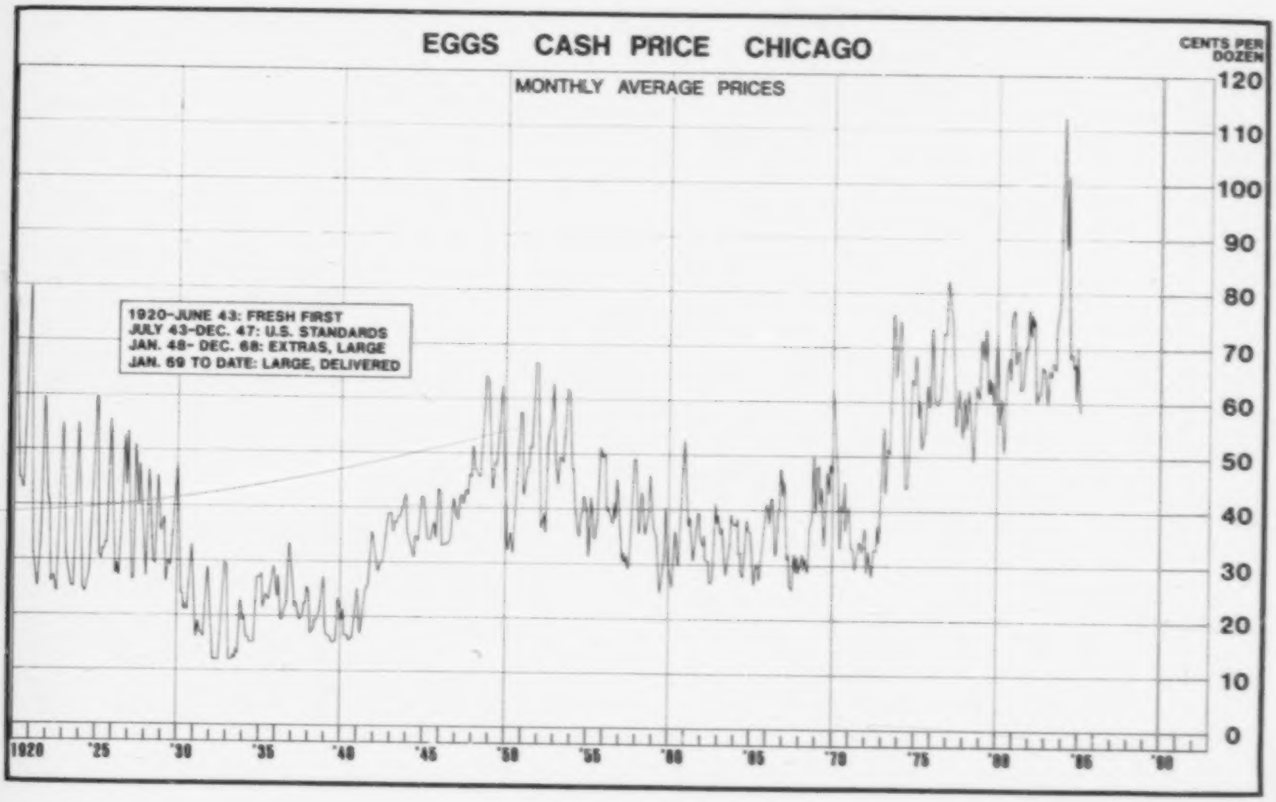
The number of layers in 1984 were 277.9 million head, almost 1 percent higher than in 1983. Carryover strong prices in the beginning of 1984 from 1983 encouraged producers to hold old hens rather than selling. The pullets that entered the laying flocks in the second half of 1984 would still be producing through the first half of 1985, and the rate of lay was expected to be above 1984 because older, less productive hens were in the flock. Consequently, the USDA expected egg production to be 3 percent higher in the first two quarters of 1985 than 1984.

In 1984, 19 percent of the flock had been molted, compared to 24.9 percent in 1983. The decline in moltings continued to a low in February of 1985 at 16.6 percent, compared to 22.9 percent in February the previous year. This revealed that producers were reducing the number of layers being molted and were selling their older hens. Producers also reduced orders for replacement pullets to enter flocks in March–June 1985. With a younger flock in 1985, the USDA estimates egg production in the second half of 1985 may be 1 percent higher than last year.

In January 1985, the egg-type chick hatch was 28.2 million, a decline of about 23 percent from early 1984.

The top four egg producing states in 1984 were California, Indiana, Georgia, and Pennsylvania. Pennsylvania, the number two producer in 1983, was fourth in 1984 because that state suffered losses last year to Avian influenza. Production there in 1985 is expected to recover as producers have rebuilt hen numbers.

The average price for 1984 was 102.4 cents per dozen. In early 1985, the USDA anticipated domestic use to remain about steady with 1984 levels, while exports were expected to remain low—mainly because of the strong U.S. dollar. Increased supplies in 1985 are expected to outweigh demand factors and keep prices weak. In the second quarter of 1985, if producers cull their older, less productive hens, prices may average 50 to 62 cents, below 1984's 83 cents. During the second half of 1985, prices may average 66 to 72 cents a dozen, about even with 1984 levels. As production increases ease relative to increases early in the year, prices may strengthen in the last half of 1985.



EGGS

World Production[2] of Eggs In Billions of Eggs

Year	Argentina	Australia	Bel. & Lux.	Brazil	Canada	Israel	France	W. Germany	Italy	Japan	Netherlands	Poland	Spain	South Africa	USSR	Un. Kingdom[3]	United States
1976	3.7	3.2	3.5	6.1	5.2	1.8	12.9	14.4	11.5	31.0	5.6	8.0			55.6	14.0	64.8
1977	3.1	3.3	3.8	6.3	5.5	1.7	13.1	14.8	11.3	31.4	6.0	8.5	10.9	3.9	61.2	14.1	64.9
1978	3.3	3.5	3.8	6.6	5.5	1.8	13.5	14.3	11.0	32.8	7.0	8.5	10.1	3.9	64.5	14.3	67.3
1979	3.4	3.4	3.5	7.2	5.6	1.8	13.8	13.3	11.0	33.2	8.2	8.7	11.0	3.1	65.6	15.0	69.2
1980	3.4	3.4	3.3	9.6	5.9	1.6	14.5	13.7	10.7	33.4	9.0	8.9	11.7	2.4	70.9	14.0	69.7
1981	3.3	3.6	3.3	10.2	5.9	1.4	15.2	13.2	11.4	33.3	9.8	8.8	11.8	2.6	70.9	13.7	69.9
1982	3.2	3.4	3.3	10.2	5.9	1.8	15.9	13.1	11.2	34.3	10.7	7.6	12.4	2.8	72.4	13.5	69.6
1983[1]	3.3	3.5	3.3	9.0	6.1	1.9	15.0	13.0	10.9	34.8	10.7	7.6	12.3	3.0	74.7	13.2	67.9
1984[4]	3.2	3.5	3.3	8.5	5.9	1.9	14.5	13.1	10.9	35.3	11.2	7.7	11.8	3.1	77.0	13.3	68.4

[1] Preliminary. [2] Relates to farm production in Canada and the United States. Information for many countries is not explicit on this point. [3] Farm production, years ending May. [4] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.210

Salient Egg Statistics in the United States

Year	Hens & Pullets — On Farms Dec. 1[2] (Millions)	Hens & Pullets — Avg.[9] Number During Year (Millions)	Rate of Lay Per Layer During Year[3] Number	Eggs — Farm Prod. (Billions)	Eggs — Price Per Dz.	Eggs — Consumed[4] on Farms (Billions)	Eggs — Sold (Billions)	Gross Income[5] Billion $	Total Egg Prod.[6] (Million Dozen)	Imports[7] (Million Dozen)	Exports[8] & Shipments (Million Dozen)	Used for Hatching (Million Dozen)	Civilian Consumption — Total (Million Dozen)	Civilian Consumption — Per Capita Eggs
1976	279.8	274.1	235	64.5	58.3	.50	64.01	3.13	5,377	3	65	419	4,857	270
1977	286.7	274.9	235	64.6	55.6	.48	64.13	2.99	5,408	14	91	427	4,865	268
1978	293.3	281.5	239	67.1	52.2	.46	66.68	2.92	5,608	11	120	466	5,009	273
1979	294.9	288.6	240	69.2	58.3	.45	68.76	3.36	5,777	10	104	498	5,162	278
1980	294.1	287.7	242	69.7	56.3	.45	69.23	3.27	5,806	5	167	499	5,122	272.4
1981	293.8	287.8	243	69.8	63.1	.44	69.38	3.67	5,825	5	257	507	5,043	265.5
1982	289.6	286.4	243	69.7	59.5	.43	69.27	3.46	5,802	3	185	506	5,071	265.3
1983[1]	278.5	276.3	247	68.2	61.1	.42	67.75	3.47	5,659	23	112	500	5,056	261.2
1984[1]	285.7	277.9	245	68.2	72.3	.39	67.80	4.11	5,705	32	86	529	5,103	261.2

[1] Preliminary. [2] Of laying age. [3] Number of eggs produced during the year divided by the average number of hens & pullets of laying age on hand during the year. [4] Consumed in households of farm producers. [5] Value of sales plus value of eggs consumed in households of producers. [6] Farm production, plus nonfarm output estimated at 10% of farm through 1954; thereafter, 1 percentage point less each year. [7] Shell-egg equivalent of eggs and egg products. [8] Shell eggs & shell equivalent of frozen & dried egg products. [9] Average number of layers on farms during the year. *Source: Agricultural Marketing Service, U.S.D.A.* T.211

Average Wholesale Prices of Shell Eggs (Large) Delivered, Chicago In Cents Per Dozen

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	78.7	75.6	67.5	62.4	55.7	57.0	62.8	59.3	59.3	53.7	55.0	61.5	62.4
1978	55.2	62.8	62.0	57.0	52.0	49.3	61.2	61.8	63.2	60.8	67.2	71.6	60.3
1979	71.3	67.7	73.5	68.7	61.9	64.8	61.9	64.0	62.0	59.7	66.3	72.4	66.2
1980	59.9	56.3	60.6	56.8	50.8	54.6	63.2	65.9	68.8	64.3	75.7	77.3	62.8
1981	71.4	67.2	66.6	69.7	62.2	62.9	67.5	68.7	70.7	71.3	77.3	72.1	69.0
1982	76.2	74.2	75.2	68.3	60.4	60.8	61.7	61.6	65.9	66.8	66.2	64.1	66.8
1983[1]	60.2	62.7	66.2	64.9	68.4	68.0	66.2	74.4	76.2	77.9	88.4	98.6	72.7
1984[1]	112.3	102.6	88.3	101.8	74.3	68.1	69.0	66.5	67.2	60.7	70.4	62.2	78.7
1985[1]	58.4												

[1] Preliminary. *Source: Commodity Economics Division, U.S.D.A.* T.212

Total Egg Production in the United States In Millions of Eggs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[2]
1977	5,447	4,917	5,546	5,361	5,478	5,213	5,310	5,369	5,318	5,592	5,534	5,803	64,602
1978	5,743	5,106	5,700	5,559	5,723	5,460	5,541	5,574	5,495	5,751	5,685	5,948	67,157
1979	5,892	5,290	5,909	5,721	5,862	5,648	5,798	5,810	5,653	5,881	5,797	6,064	69,209
1980	6,047	5,595	5,956	5,715	5,798	5,582	5,708	5,753	5,725	5,948	5,795	6,054	69,686
1981	6,020	5,421	6,009	5,761	5,855	5,608	5,799	5,835	5,685	5,919	5,859	6,079	69,825
1982	5,958	5,333	17,557			17,231			17,419			6,030	69,718
1983	5,931	5,354	5,928	5,622	5,711	5,526	5,666	5,639	5,493	5,699	5,570	5,773	68,169
1984[1]	5,684	5,323	5,792	5,639	5,738	5,522	5,747	5,762	5,619	5,852	5,742	6,037	68,193
1985[1]	5,951	5,292											

[1] Preliminary. [2] Dec. 1 previous year thru Nov. 30. *Source: Crop Reporting Board, U.S.D.A.* T.219

Total Eggs—U.S. Supply and Distribution In Millions of Dozen

	Supply				Utilization					
							Domestic Disappearance			
									Civilian[1]	
Year & Quarters	Production	Imports[1]	Beginning Stocks[1]	Total Supply	Ending Stocks[1]	Exports & Shipments[1]	Eggs Used for Hatching	Military	Total	Per Capita (Number)
1980 I	1,467	.2	18.9	1,467	18.4	35.8	128.0	6.4	1,297	69.3
II	1,425	1.6	18.4	1,421	23.2	37.3	128.3	5.7	1,250	66.6
III	1,432	1.9	23.2	1,434	23.7	39.5	119.9	6.7	1,268	67.3
IV	1,483	1.4	23.7	1,489	19.4	53.9	122.4	5.3	1,307	69.2
1981 I	1,454	.6	19.4	1,456	17.9	60.5	131.2	5.5	1,259	66.5
II	1,435	1.8	17.9	1,435	19.6	62.3	131.7	6.6	1,235	65.1
III	1,443	1.8	19.6	1,445	19.9	65.6	121.3	6.1	1,252	65.8
IV	1,492	.4	19.9	1,495	17.5	68.3	122.5	6.9	1,297	68.0
1982 I	1,444	.5	17.5	1,447	14.4	53.1	128.4	5.9	1,260	65.9
II	1,441	.3	14.4	1,437	18.2	36.9	132.4	4.8	1,263	65.9
III	1,436	1.6	18.2	1,434	22.3	37.6	120.4	6.4	1.270	66.1
IV	1,480	.1	22.3	1,483	20.3	57.3	124.5	5.3	1,296	67.3
1983[3] I	1,434	5.0	20.3	1,442	18.1	30.2	128.4	6.3	1,277	66.2
II	1,405	2.9	18.1	1,409	17.4	29.2	129.2	6.9	1,243	64.3
III	1,400	7.4	17.4	1,411	13.2	26.7	120.1	6.5	1,258	64.9
IV	1,420	8.2	13.2	1,432	9.3	26.4	122.4	5.4	1,278	65.8
1984[2] I	1,400	13.9	9.3	1,413	10.2	17.5	132.7	4.2	1,259	64.6
II	1,408	7.6	10.2	1,412	13.7	15.3	137.8	5.3	1,254	64.2
III	1,427	7.2	13.7	1,435	13.4	26.7	128.2	3.7	1,276	65.3
IV	1,469	3.4	13.4	1,475	11.1	26.5	130.1	4.4	1,314	67.1
1985 I			11.1							

[1] Shell eggs & the approx. shell-egg equivalent of egg product. [2] Less than 100,000 dozen. [3] Forecast.
Source: Commodity Economics Division, U.S.D.A.

T.213

Shell Eggs: Civilian Per Capita Disappearance in the United States Number of Eggs

	Shell Equivalent														
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]	Processed[2]	Total
1975	22.0	19.4	21.9	20.4	20.6	19.2	20.1	20.6	19.9	20.9	20.9	21.7	248	31	279
1976	21.7	19.6	20.5	19.6	20.5	19.2	20.1	20.1	19.3	20.3	19.5	20.8	241	33	274
1977	20.9	17.9	20.1	19.2	19.4	18.1	19.1	19.1	19.0	20.7	20.2	21.4	235	37	272
1978	21.1	18.6	20.8	20.0	20.3	18.8	19.7	19.8	19.7	20.9	20.7	21.9	242	36	278
1979	21.3	18.5	21.0	20.0	20.1	19.2	20.1	19.9	19.8	20.2	20.2	21.8	242	36	278
1980	21.1	19.0	20.9	19.4	19.8	18.7	19.0	19.6	19.4	19.8	20.0	20.7	237.3	35	272
1981		58.5			56.7			57.3			60.7		233.1	33	265
1982		58.6			57.0			56.5			59.1		231.2	34	265
1983		57.8			55.5			55.0			57.6		225.9		
1984[3]		55.8			54.9			55.3			60.9		266.9		

[1] Monthly totals do not necessarily add to yearly figures due to rounding. [2] Liquid, frozen, & dried egg (egg solids) converted to shell egg equivalent. [3] Preliminary. *Source: Economic Research Service, U.S.D.A.*

T.214

Egg-Feed Ratio[1] in the United States

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	7.2	7.2	7.6	6.5	6.5	6.3	6.4	6.8	7.5	7.1	8.1	9.0	7.2
1976	8.6	8.2	7.4	7.3	7.5	6.8	6.8	7.6	7.7	7.8	8.7	9.1	7.9
1977	8.5	8.1	7.3	6.8	5.9	5.8	6.7	7.2	7.6	7.1	7.3	7.4	7.1
1978	6.7	7.5	7.4	6.7	6.3	5.6	6.4	7.0	7.3	7.0	7.5	8.0	7.0
1979	7.8	7.7	8.0	7.4	6.9	6.7	6.1	6.1	6.4	6.1	6.8	7.3	6.9
1980	6.6	6.0	6.4	6.0	5.4	5.6	5.7	6.0	6.2	5.7	6.0	6.6	6.0
1981	5.9	5.7	5.6	5.9	5.2	5.2	5.5	5.8	6.4	6.5	7.2	6.7	6.0
1982	6.6	6.8	7.2	6.6	5.6	5.3	5.7	5.3	6.0	6.3	6.3	6.0	6.2
1983	5.7	5.8	6.1	5.8	6.0	5.8	5.7	6.1	6.0	6.2	6.9	7.6	6.2
1984[2]	8.8	8.6	7.4	8.5	6.4	5.8	5.7	5.8	5.9	5.7	6.5	6.2	6.8
1985[2]	5.5	5.6	6.2										

[1] Pounds of laying feed equivalent in value to one dozen eggs. [2] Preliminary. *Source: Commodity Economics Division, U.S.D.A.*

T.215

EGGS

Hens and Pullets of Laying Age in the U.S., First of Month In Millions

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1978	287.7	283.7	280.7	279.7	278.2	277.3	275.0	275.2	279.0	283.9	288.3	293.3
1979	291.7	292.1	290.2	288.6	285.5	283.4	283.7	285.1	287.2	290.2	291.7	294.9
1980	296.0	293.1	288.7	285.3	280.8	279.5	279.9	282.2	287.9	291.7	292.8	294.1
1981	295.2	292.4	291.3	286.3	284.5	282.5	280.9	284.5	283.8	287.2	290.5	293.8
1982	291.7	290.1	288.4	—	—	282.7	—	—	281.9	—	—	289.6
1983	285.8	283.3	280.5	276.9	273.0	271.8	270.1	269.7	271.5	272.2	276.4	278.5
1984[1]	277.2	276.5	276.8	276.6	276.3	276.3	276.8	274.3	277.7	281.0	282.8	285.7
1985[1]	287.1	281.7	278.9									

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.216

Eggs Laid Per Hundred Layers in the United States In Number of Eggs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	2,009	1,808	2,035	1,993	2,061	1,979	2,016	2,012	1,954	2,011	1,955	2,033	
1979	2,018	1,817	2,042	1,994	2,062	1,992	2,038	2,030	1,958	2,021	1,976	2,052	
1980	2,053	1,923	2,075	2,019	2,070	1,996	2,031	2,018	1,976	2,035	1,975	2,054	2,422
1981	2,049	1,857	2,081	2,018	2,065	1,991	2,051	2,053	1,991	2,049	2,005	2,083	2,426
1982	2,048	1,850	6,159			6,112			6,105			2,097	2,435
1983	2,084	1,899	2,127	2,045	2,096	2,039	2,099	2,084	2,021	2,078	2,008	2,078	2,468
1984[1]	2,054	1,925	2,085	2,030	2,077	1,996	2,083	2,085	2,010	2,076	2,020	2,109	2,046
1985[1]	2,092	1,887											

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.221

Egg-Type Chicks Hatched by Commercial Hatcheries in the United States In Millions

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	36.9	36.9	46.8	50.9	53.7	45.6	35.8	38.6	37.2	37.7	35.6	35.9	491.6
1979	39.9	39.5	50.1	52.4	55.9	47.8	42.8	41.9	36.6	39.5	37.5	36.4	519.0
1980	38.1	42.1	46.5	47.9	47.6	42.3	37.9	38.0	37.4	37.3	33.8	35.8	484.6
1981	37.8	36.1	44.5	48.3	46.1	40.5	32.3	33.8	32.3	35.9	33.7	33.1	454.2
1982	36.7	36.4	44.2	46.6	47.3	39.4	35.4	33.5	31.2	32.3	30.2	31.1	444.4
1983	32.6	33.0	39.3	36.7	38.3	37.5	30.5	30.9	31.8	32.3	29.6	34.4	406.9
1984[1]	36.9	37.5	45.7	47.9	49.0	46.5	38.4	34.8	33.1	31.4	30.1	27.1	458.5
1985[1]	28.3	28.5											

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.220

U.S. Cold Storage Holdings of Shell Eggs, 1st of Month In Thousands of Cases (One Case = 30 Dozen)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	39	34	27	25	36	29	26	26	48	43	23	35
1979	38	22	18	24	20	27	24	32	28	31	24	24
1980	38	47	24	22	30	47	51	39	28	39	15	19
1981	31	28	18	31	31	25	41	39	20	19	21	38
1982	35	28	19	39	—	—	32	—	—	29	—	—
1983	34	35	25	18	23	32	44	24	25	25	45	18
1984	13	28	17	36	35	41	42	29	31	23	37	35
1985[1]	31	30	30									

[1] Preliminary. *Source: Crop Reporting, Board U.S.D.A.* T.217

U.S. Cold Storage Holdings of Frozen Eggs, 1st of Month In Millions of Pounds[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	29.7	27.0	25.5	22.9	22.9	22.2	26.6	28.0	28.7	28.7	27.6	25.6
1979	25.3	25.5	24.5	21.1	21.7	21.6	22.8	25.9	24.7	24.1	25.6	23.4
1980	23.4	22.1	23.8	23.4	25.9	26.6	28.6	29.4	30.7	29.7	29.2	25.3
1981	24.3	24.3	24.2	22.3	21.9	22.7	24.2	26.9	27.2	25.5	25.6	23.7
1982	21.6	21.2	19.4	17.4	—	—	22.7	—	—	28.3	—	—
1983	25.4	25.5	25.7	23.1	22.5	21.2	21.1	20.4	19.0	16.4	14.2	13.4
1984	11.8	11.0	11.4	12.0	12.7	12.8	16.4	17.5	16.6	16.7	17.9	16.2
1985[2]	13.4	14.9	13.4									

[1] Converted on basis 39.5 pounds frozen eggs equals 1 case. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.218

Electric Power

According to a 1984 survey by the respected trade publication *Electrical World*, utilities progressed with plans to install 775 three-phase distribution-substation transformer banks that would account for 21.8 gigavolt-amperes (GVA) during the year. These installations amounted to an increase of 17 percent over 18.6 GVA installed in 1983, and the utility companies responding to the survey represented nearly 77 percent of installed generating capacity in the contiguous U.S. Utilities also planned to install 27.6 GVA of distribution line transformers, 46 kilovolts and below, in 1984. These installations represented a 1 percent decline from the total installed during 1983. These gains were relatively modest considering industrial growth and new housing and commercial construction activity during 1984. For example, actual sales billed by distribution transformer manufacturers during the first half of 1984 showed a substantial 43 percent gain compared with the same period in 1983. Therefore, unless the survey of planned installations was underestimated or did not account for replacement of failed units, actual manufacturers' sales would indicate a buildup of inventories during the first half of the year.

Utility planners estimated that distribution substation banks would decline from planned additions of 21.8 GVA in 1984 to 20.4 GVA in 1985. Additions of distribution line transformers, on the other hand, were expected to increase from 27.6 GVA in 1984 to 28.5 GVA in 1985. No recovery for producers of large power transformers was expected, and utility planners generally looked for activity in the transmission sector to be depressed. Planned additions of transmission substation banks were expected to drop about 15 percent from installation additions of 51 GVA in 1984. Shipments of fossil-fired power boilers were expected to be at the rate of 51 million pounds of steam per hour in 1984, significantly below the 65 million pounds level of 1983. No orders for nuclear-steam supply systems were placed during 1984, and prospects for 1985 orders may be limited to foreign customers. Shipments of turbine-generator sets in 1984 total 12,800 megawatts (MW), nearly equal to the 1983 level.

World Electricity Production In Billions of KWH

Year	Australia	Brazil	Canada	Czechoslov.	France	W. Germany	Italy	Japan	Norway	Poland	Sweden	Switzerland	South Africa	Un. Kingdom	United States	USSR
1971	58.0		216.5	47.2	155.8		124.9	385.6	63.6	69.3	66.6	32.8	55.0	256.4	1,718	800.4
1972	60.9		240.2	51.4	170.9		135.3	428.5	67.6	76.5	71.7	31.3	59.1	263.6	1,853	857.4
1973	64.8		263.3	53.5	182.4		145.5	470.3	73.1	84.3	78.1	37.2	64.5	281.9	1,965	914.6
1974	69.8	72.4	280.3	56.0	188.2	311.7	148.9	459.0	76.7	91.6	75.1	37.4	70.1	273.1	1,967	975.8
1975	73.9	78.9	273.4	59.3	185.3	301.8	147.3	475.8	77.5	97.2	80.6	43.0	74.9	272.0	2,003	1,039
1976	76.6	90.0	294.0	62.7	203.1	333.6	163.5	511.8	82.1	104.1	86.4	36.2	79.4	276.9	2,123	1,111
1977	82.2	100.8	317.2	66.5	210.7	335.3	166.5	532.6	72.4	109.4	87.4	45.9	80.3	283.1	2,211	1,178
1978	86.2	112.5	335.7	69.1	226.7	353.4	175.0	564.0	81.0	115.6	90.3	42.3	84.5	287.7	2,286	1,200
1979	92.1	126.5	353.1	68.1	241.1	374.2	180.5	589.6	89.1	117.5	92.4	42.7	90.3	299.9	2,319	1,238
1980	96.3	139.5	366.9	72.6	243.3	368.8	185.7	577.5	84.1	121.9	93.4	46.6	95.0	284.9	2,354	1,295
1981	102.5	142.2	380.1	74.1	260.8	368.0	181.8	583.2	92.8	115.0	100.0	48.0	97.4	277.7	2,359	1,325
1982	104.9	152.1	376.6	74.7	262.2	366.9	183.7	581.1	91.9	117.6	96.6	50.8	119.9	272.1	2,304	1,367
1983[1]	109.2		395.5	76.0	297.2	371.8	180.7	555.5	104.7	125.9	105.9	50.8	108.3	276.2	2,383	1,396
1984[2]	120		405	75	300	375	182	580	103	130	110	48		280	2,420	1,400

[1] Preliminary. [2] Estimate. *Source: United Nations* T.222

Installed Capacity, Capability & Peak Load of the U.S. Electric Utility Industry In Millions of Kilowatts

	Installed Generating Capacity at Dec. 31															
		Type of Prime Mover				Type of Ownership										
Year	Total Electric Utility Industry	Hydro	Gas Turbine & Steam	Nuclear Power	Internal Combustion	Investor Owned	Cooperatives	Sub-Total Gov't.	Municipal Utilities	Federal	Power Districts, State Projects	Capability at Winter Peak Load	Non-Coincident Winter Peak Load	Margin of Reserve (%)	Generation	Load Factor (%)
1971	367.4	55.9	259.7	8.7	4.5	286.9	5.4	75.1	21.8	39.7	13.7	366.7	261.7	20.9	1,617	63.2
1972	399.6	56.6	322.9	15.3	4.8	314.9	6.7	78.0	23.2	40.6	14.2	394.1	291.0	19.6	1,752	62.5
1973	439.9	61.8	352.1	21.1	4.9	346.5	7.3	86.1	25.0	44.5	16.6	433.2	295.1	20.8	1,869	62.0
1974	476.0	63.6	375.7	31.7	5.0	376.1	7.5	92.4	27.3	45.8	19.2	467.4	302.5	27.2	1,872	61.2
1975	508.9	65.9	397.6	39.8	5.1	399.0	9.1	100.2	28.8	50.1	21.3	492.5	331.1	34.3	1,920	61.4
1976	531.2	67.8	415.2	42.8	5.3	415.5	9.9	105.7	30.6	51.7	23.4	511.0	349.9	34.5	2,040	62.6
1977	560.4	63.8	436.4	49.9	5.3	438.4	10.9	111.1	34.3	53.2	24.6	537.6	360.2	30.2	2,132	51.4
1978	579.3	71.0	449.2	53.5	5.5	453.6	11.6	114.0	34.4	54.3	25.3	561.6	383.1	33.7	2,219	62.1
1979	598.4	75.4	463.0	54.6	5.5	464.1	13.8	120.5	34.5	58.3	27.6	554.3	368.9	36.9	2,247	64.4
1980	613.7	76.4	475.3	56.5	5.6	477.1	15.4	121.2	34.6	59.1	27.5	572.2	384.6	30.8	2,293	61.1
1981	635.0	77.2	491.3	60.8	5.6	490.8	18.4	125.7	35.1	61.0	29.5	581.1	391.1	33.6	2,311	61.6
1982	650.1	78.1	503.8	63.0	5.1	499.1	21.5	129.5	35.8	62.5	31.2		373.3	39.3	2,241	62.1
1983[1]	658.2	79.0	507.1	67.1	5.0	505.5	22.2	130.5	36.6	63.0	30.9		410.8	33.3	2,310	59.7

[1] Preliminary. *Source: Federal Power Commission* T.223

ELECTRIC POWER

Available Electricity & Energy Sales in the United States In Billions of Kilowatt Hours

	Generation						Sales to Ultimate Customers								
	Electric Utility Industry														
Year	Hydro	Steam	Nuclear	Total[5]	Other Sources[2]	Total	Total Million $	Total[4]	Residential	Inter-Departmental	Commercial	Indust-Industrial	Street & Highway	Other Public Authorities	Railways & Rail roads
1971	266.3	1,302	38.1	1,613	103	1,716	24,725	1,466	479.1	4.9	333.8	592.7	11.7	39.8	4.5
1972	272.6	1,416	54.1	1,750	105	1,854	27,921	1,578	511.4	5.1	361.9	639.5	12.2	43.2	4.4
1973	271.6	1,495	83.3	1,856	103	1,959	31,663	1,703	554.2	5.5	396.9	687.2	12.8	42.3	4.2
1974	300.9	1,446	113.7	1,866	102	1,968	39,127	1,701	555.0	5.4	392.7	689.4	13.3	40.7	4.3
1975	300.1	1,439	172.5	1,918	85	2,003	46,855	1,733	586.1	5.4	418.1	661.1	13.9	43.6	4.3
1976	283.7	1,558	191.1	2,038	87	2,125	53,463	1,850	613.1	6.4	440.6	725.2	14.4	45.6	4.3
1977	220.4	1,648	250.9	2,124	88	2,212	62,610	1,951	652.3	7.2	469.2	757.2	14.4	46.2	4.2
1978	280.4	1,645	276.4	2,206	79	2,300	69,853	2,018	679.2	7.1	480.7	782.1	14.8	49.5	4.3
1979	279.8	1,708	255.2	2,247	71	2,318	78,640	2,084	695.0	7.4	494.7	817.6	14.8	49.6	4.3
1980	276.0	1,756	251.1	2,283	68	2,351	95,462	2,126	734.4	6.4	524.1	793.8	14.8	48.3	4.3
1981	260.7	1,759	272.7	2,295	70	2,365	111,016	2,151	730.5	6.2	521.7	819.6	14.7	53.7	4.2
1982	309.2	1,647	282.1	2,238			121,584	2,100	732.7	5.4	517.0	770.4	14.2	55.7	4.3
1983	332.1	1,682	293.7	2,308			129,558	2,153	750.9	5.4	546.3	780.0	14.1	56.7	4.3
1984[3]							140,000	2,330	800	7.0	595	850	14.0	64.1	4.3

[1] Preliminary. [2] Includes generation of industrial and railway electric plants. [3] Estimate. [4] Also includes interdepartmental (averages about 600 million kwh). [5] Includes internal combustion. *Sources: Federal Power Commission; Edison Electric Institute*

T.224

Electric Power Production by Electric Utilities in the U.S.[2] In Billions of Kilowatt Hours

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	145.6	131.3	141.4	130.7	133.7	150.5	153.9	154.2	145.9	139.5	138.9	148.0	1,714
1972	153.0	145.5	148.9	140.5	146.5	154.4	166.7	171.8	155.8	152.5	152.4	163.1	1,851
1973[2]	159.3	143.1	147.8	139.3	147.0	161.0	173.5	177.0	156.3	153.8	147.8	153.3	1,861
1974	156.9	142.4	149.9	141.9	153.4	156.0	177.9	173.8	152.2	151.9	149.8	159.5	1,867
1975	164.3	147.1	155.5	146.2	153.2	162.4	176.8	179.7	155.2	154.9	152.8	169.4	1,918
1976	178.3	156.7	164.2	153.2	157.4	173.4	186.4	186.4	165.0	163.7	169.1	183.9	2,038
1977	196.4	162.7	169.1	156.9	169.3	180.8	198.9	196.1	176.2	166.4	167.1	184.2	2,124
1978	197.3	173.7	173.2	159.7	175.2	187.4	202.6	205.6	185.6	175.6	176.3	191.7	2,206
1979	209.7	186.3	182.8	170.0	178.1	186.7	202.3	204.9	180.8	179.7	177.5	188.7	2,247
1980	200.0	188.7	187.5	168.7	175.7	189.4	216.8	215.4	191.5	178.6	178.6	195.6	2,286
1981	206.5	179.6	185.6	172.5	177.8	202.7	220.4	210.4	186.8	181.4	175.6	195.6	2,295
1982[1]	209.4	180.3	187.7	172.6	177.1	186.1	210.6	205.7	180.7	173.0	173.4	184.7	2,241
1983[1]	195.7	172.5	182.5	170.4	174.4	191.0	220.2	230.0	195.6	182.9	182.9	212.3	2,310
1984[1]	216.5	189.5	199.4	180.9	191.9	209.4	220.7	229.1	194.9	190.4			

[1] Preliminary. [2] Data prior to 1973 are production by UTILITIES & INDUSTRIAL ESTABLISHMENTS. *Source: Federal Power Commission*

T.225

Use of Fuels for Electric Generation in the United States

	Consumption of Fuel									
Year	Coal (Thousand Short Tons)	Fuel Oil (Thousand Barrels)[2]	Gas (Million Cubic Feet)	Total Fuel in Coal Equivalent (Thousand Short Tons)	Net Generation by Fuels[3] (Million Kw. Hr.)	Lbs. of Coal Per Kw. Hr. (Pounds)	% of Total Net Fuel Generation	Average Cost of Fuel Per Kw. Hr. (¢)	Heat Rate BTU Per Kw. Hr.	Cost Per Million BTU Consumed (¢)
1971	327,878	396,438	3,975,972	599,766	1,307,310	.918	95.9	.40	10,536	37.5
1972	352,391	493,663	3,976,762	647,968	1,421,136	.912	95.6	.43	10,479	41.1
1973	388,190	559,842	3,640,756	688,043	1,498,958	.918	96.1	.50	10,429	48.4
1974	392,344	536,140	3,429,072	685,115	1,449,079	.946	95.6	.93	10,481	89.0
1975	406,032	506,081	3,157,591	686,236	1,441,611	.952		1.12	10,383	108.3
1976	448,431	555,583	3,080,627	740,112	1,558,951	.950		1.20	10,369	115.3
1977	477,215	623,656	3,190,571	798,425	1,648,775	.969		1.38	10,449	131.8
1978	481,624	635,829	3,188,370	811,814	1,646,163	.986		1.53	10,495	145.3
1979	527,317	523,256	3,490,517	837,371	1,708,029	.981		1.62	10,470	155.4
1980	569,453	420,214	3,681,595	916,952	1,753,749	.980		2.07	10,489	197.0
1981	596,936	351,111	3,640,154	922,133	1,755,401	.992		2.42	10,506	230.2
1982	593,666	249,771	3,225,518	858,869	1,644,062	.996		2.46	10,517	234.0
1983[1]	625,211	245,497	2,910,767	861,621	1,678,021	.993		1.39	10,539	227.1

[1] Preliminary. [2] 42-gallon barrels. [3] Excludes wood & waste fuels *Source: Federal Power Commission*

T.226

Fertilizer

The fertilizer industry produces nitrogenous, phosphatic, and potassic (potassium) fertilizers. Nitrogen, phosphorous, and potassium are the primary plant nutrients. The basic nitrogen fertilizer is ammonia, which is made from natural gas and nitrogen. Ammonia may be applied in liquid form beneath the surface of the soil or converted into solid nitrogenous fertilizers, such as urea or diammonium phosphate. Phosphoric acid, made from phosphate rock and sulfuric acid, is the source of most of the phosphorous used in agriculture. The major potassium fertilizer is potassium chloride, more commonly called potash. Fertilizer chemicals based on nitrogen account for 53 percent of total world fertilizer consumption and those based on phosphorous 26 percent, and potassium 21 percent.

Increased demand and reduced inventories, higher prices, and increased production characterized the U.S. nitrogenous fertilizer industry in 1984. Production, as measured by output of ammonia (used to make almost all nitrogen fertilizer chemicals) rose to 16 million short tons, up 17 percent. The increased demand and higher prices brought back 2 million tons of idle capacity in 1984, increasing total capacity to over 17 million short tons. The 1984 operating level was over 90 percent.

Phosphatic fertilizers are made from phosphate rock (expressed as phosphorous pentoxide). Production in 1984 was projected to reach 16.5 million short tons of phosphorous pentoxide, up 18 percent over 1983. Since exports of rock were about the same in both 1983 and 1984—approximately 4 million tons—the increase in 1984 production went into the domestic market.

The 13 percent increase of product shipments of phosphates in 1984 over 1983 was due to a combination of favorable weather and an increase in farm acreage. The USDA's payment-in-kind program had previously cut acreage to reduce grain inventories. While 1984 was a good year for phosphatic fertilizers compared to 1983, its performance was below that for every year from 1967 through 1981.

In 1985, the value of product shipments of nitrogenous fertilizers in constant dollars is forecast to increase by 4 percent over 1984 shipments. These shipments, however, are expected to be less than shipments for 1979, 1980, and 1981 measured in constant dollars. Since U.S. ammonia producers were expected to continue operating close to capacity (about the same as the 1984 level), additional required supply was expected to come from increased imports. No increase was expected from the U.S.S.R., and the Mexicans reportedly announced a decrease in their 1985 exports of ammonia. Additional supplies were expected to come from Canada, Trinidad, Brazil, and Venezuela. Restrictions by the Soviet Union and Mexico could act to tighten supplies and increase the world price for ammonia and its derivatives. Additional urea was expected from Canada, the U.S.S.R., Romania, and Venezuela.

Phosphatic fertilizer product shipments in 1985 were expected to rise by 4 percent measured in constant dollars. This would be a reflection of a small increase in both the domestic market and the export market.

World Production of Ammonia In Thousands of Short Tons of Contained Nitrogen

Year	Bulgaria	Canada	China	France	E. Germany	W. Germany	India	Italy	Japan	Mexico	Netherlands	Romania	Un. Kingdom	United States	USSR	Total
1977	.9	1.9	6.2	2.2	1.2	2.2	2.2	1.3	2.5	.9	2.4	2.0	1.8	14.7	11.8	68.3
1978	.9	2.1	8.4	2.2	1.3	2.2	2.4	1.7	2.6	1.4	2.4	2.5	1.8	14.2	12.5	74.1
1979	.9	2.2	9.7	2.4	1.2	2.4	2.5	1.6	2.6	1.5	2.1	2.6	1.8	15.4	13.4	78.4
1980	.9	2.3	11.0	2.3	1.3	2.3	2.4	1.5	2.3	1.7	2.1	2.5	1.8	16.2	13.9	81.4
1981	.9	2.4	13.4	2.5	1.3	2.2	3.5	1.3	2.0	2.0	2.0	2.6	2.0	15.7	14.2	84.5
1982[1]	.9	2.3	14.0	2.1	1.3	1.7	3.6	1.2	1.8	2.2	1.8	2.9	1.9	13.0	16.1	83.6
1983[1]	.9	2.6	16.5	2.2	1.2	1.9	3.5	1.2	1.7	2.1	1.9	2.9	1.9	11.2	16.0	85.4
1984[2]		2.7		2.2		1.9	3.5	1.2	1.7	2.2	2.0		1.9	12.8		88.0

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.227

U.S. Salient Statistics of Nitrogen[1] (Ammonia) In Thousands of Short Tons

Year	Net Import Reliance as a % of Appar. Con.	Production (Fixed)	Imports Fixed	Exports (Ammonia)	Apparent Consumption			Producer Stocks (Year End)	Average Price ($ Per Sh. Ton)			
									Urea		Ammonium Nitrate: Deliv. Corn Belt	Ammonia F.O.B. Gulf Coast
					Fixed (Ammonia)	Elemental	Fixed		F.O.B. Gulf Coast	Deliv. Corn Belt		
1977	1	14,712	884	346		11,870	14,831	2,269				90
1978	7	14,169	1,247	434		13,707	15,270	2,044	106–110	125–135	86–90	80–84
1979	7	15,420	1,603	647		14,386	16,565	1,752	145–150	165–170	118–120	128–132
1980	9	16,244	1,921	681			17,665	1,483	170–175	155–170	110–115	120–125
1981	5	15,655	1,719	506			16,390	1,960	130–135	170–180	138–150	132
1982	8	12,968	1,737	610			14,084	1,970	122–125	135–145	125–145	120
1983[1]	18	11,246	2,169	298			13,668	1,422	135–140	160–167	135–145	175
1984[2]	14	12,800	2,500					1,500				165

[1] Elemental, Fixed, & Natural Nitrates. [2] Estimates. *Source: Bureau of Mines* T.228

FERTILIZER

World Production of Phosphate Rock[3] In Thousands of Metric Tons (Gross Weight)

Year	Brazil	China	Christmas Isl.	Israel	Jordan	Morocco	Nauru Island	Senegal	South Africa	Togo	Tunisia	United States	USSR	Syria	World Total
1977	676	4,000	1,186	1,227	1,782	17,572	1,146	1,871	2,403	2,857	3,615	47,256	26,925	425	119,310
1978	1,096	4,695	1,400	1,725	2,303	19,713	1,999	1,759	2,699	2,827	3,712	50,037	23,900	800	125,022
1979	1,628	8,517	1,367	2,086	2,825	20,032	1,828	1,835	3,221	2,920	4,154	51,611	24,400	1,272	131,825
1980	2,612	10,726	1,713	2,307	3,911	18,824	2,087	1,632	3,185	2,933	4,582	54,415	25,300	1,319	139,214
1981	3,238	11,500	1,423	1,919	4,244	18,562	1,480	1,699	2,718	2,215	4,596	53,624	25,600	1,321	138,169
1982[1]	2,732	11,720	1,328	2,148	4,390	17,754	1,359	975	3,173	2,128	4,196	37,414	26,700	1,455	122,202
1983[1]	3,208	12,500	1,094	2,969	4,749	20,106	1,684	1,249	2,742	2,081	5,924	42,573	27,200	1,229	135,000
1984[2]		13,000		3,000	5,000	21,000		2,000	2,600	2,000	5,600	48,406	27,500		143,000

[1] Preliminary. [2] Estimate. [3] And Basic Slag & Guano. *Source: Bureau of Mines* T.229

U.S. Salient Statistics of Potash In Thousands of Metric Tons (K_2O Equivalent)

Year	Net Import as % of Consum.	Production	Sales by Producers	Value Mil. $	Imports for Consumption	Exports	Apparent Consumption	Producer Stocks Dec. 31	$ per ton: Avg. Value Per Ton of Product—$	$ per ton: Avg. Value of K_2O Equiv.	Average Price[3] $ Per Met. Ton
1976	61	2,177	2,268	210.8	4,168	857	5,578	471	50.37	92.93	73
1977	63	2,229	2,232	206.9	4,605	845	5,992	467	48.78	92.68	71
1978	64	2,253	2,307	226.5	4,707	809	6,205	414	51.97	98.16	76
1979	66	2,225	2,388	279.2	5,165	635	6,918	251	61.38	116.92	95
1980	65	2,239	2,217	353.9	4,972	840	6,349	273	82.98	159.63	133
1981	65	2,156	1,908	328.9	4,796	491	6,213	520	89.62	172.40	137
1982	65	1,784	1,784	265.6	3,858	519	5,123	520	78.42	148.87	109
1983[1]	75	1,429	1,513	220.8	4,440	300	5,653	437	74.85	145.97	100
1984[2]	74	1,600			4,900	450	6,100	390			110

[1] Preliminary. [2] Estimate. [3] Unit of K_2O, standard 60% muriate f.o.b. mine. *Source: Bureau of Mines* T.232

World Production of Marketable Potash In Thousands of Metric[3] Tons (K_2O Equivalent)

Year	Canada (sales)	Chile	China	Congo (Brazz.)	France	Germany East	Germany West	Israel	Italy	Jordan	Spain	USSR	United States	United Kingdom	World Total
1976	4,996	15	150	254	1,603	3,161	2,036	680	330	—	630	8,310	2,177	41	24,386
1977	5,764	11	18	136	1,580	3,229	2,341	730	224	—	562	8,347	2,229	81	25,252
1978	6,340	17	21	—	1,795	3,323	2,470	744	196	—	613	8,193	2,253	157	26,122
1979	7,074	22	16	—	1,921	3,395	2,616	737	182	—	668	6,635	2,225	277	25,768
1980	7,532	25	12	—	1,894	3,422	2,737	797	156	—	658	8,064	2,239	321	27,857
1981	6,549	21	20	—	1,831	3,460	2,592	839	146	—	732	8,449	2,156	285	27,080
1982[1]	5,309	22	26		1,701	3,434	2,057	1,004	146	9	692	8,079	1,784	401	24,664
1983[2]	6,203		25		1,537	3,430	2,419	1,000	125	170	657	9,300	1,429	302	26,678
1984[2]	6,700				1,600	3,450	2,450	1,200	130	450	500	9,500	1,600	320	27,900

[1] Preliminary. [2] Estimate. *Source: U.S. Bureau of Mines* T.231

U.S. Salient Statistics of Phosphate Rock In Thousands of Metric Tons

Year	Mine Production	Marketable Production	Value Mil. $	Imports for Consumption	Exports	Apparent Consumption	Stocks, Dec. 31 (Producer)	Price—$ Avg. Per Metric Ton (f.o.b. Plant)
1976	154,278	44,662	949.4	42	9,433	31,131	13,770	21.26
1977	166,893	47,256	821.7	158	13,230	34,365	13,682	17.39
1978	173,429	50,037	928.8	908	12,870	36,812	15,748	18.56
1979	185,757	51,611	1,046	886	14,358	39,591	14,500	20.26
1980	209,883	54,415	1,257	486	14,276	40,791	13,709	23.10
1981	183,733	53,624	1,439	13	10,395	35,144	20,200	26.82
1982	104,135	37,414	950	31	9,842	28,760	18,287	25.40
1983[1]	125,691	42,573	1,021	9	12,010	34,840	14,600	23.98
1984[2]		48,406		10	11,521	41,553	12,167	24.00

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.230

Flaxseed and Linseed Oil *(See feature article on page 21T)*

The USDA in early 1985 forecast 1984/85 world production of flaxseed of 2.404 million metric tons, nearly 9 percent above estimated 1983/84 output. A sharp increase in Canadian production more than offset reduced prospects in Argentina, the other major world producer. U.S. production increased from the previous season's low figure.

The 1984/85 world flaxseed crush was forecast by the USDA at 2.016 million tonnes, off from 2.136 million estimated for 1983/84. World exports in 1984/85 were estimated at 553 thousand tonnes, off 19 percent from 1983/84 exports. World 1984/85 ending stocks were projected at 352 thousand tonnes vs. 330 thousand at the end of the 1983/84 season.

World production of linseed oil in the 1984/85 season was forecast by the USDA at 681 thousand tonnes in early 1985 versus an estimated 721 thousand in 1983/84; exports at 214 thousand tonnes versus 291 thousand in 1983/84; based on assumed extraction rates, which represent potential rather than actual production. Ending stocks were projected at 44 thousand tonnes versus 51 thousand estimated for the end of the 1983/84 season. World production of linseed meal in 1984/85 was estimated by the USDA at 1.37 million tonnes, and 1984/85 production was forecast at 1.30 million tonnes. World exports of linseed meal in 1983/84 were estimated at 695 thousand tonnes and 1984/85 exports forecast at 609 thousand tonnes. Ending 1984/85 season stocks were projected at 28 thousand tonnes, about unchanged from a year earlier. The bulk of the flaxseed (linseed) harvest in Canada takes place in the August–October period; in December–January for Argentina; and July–October in the USSR.

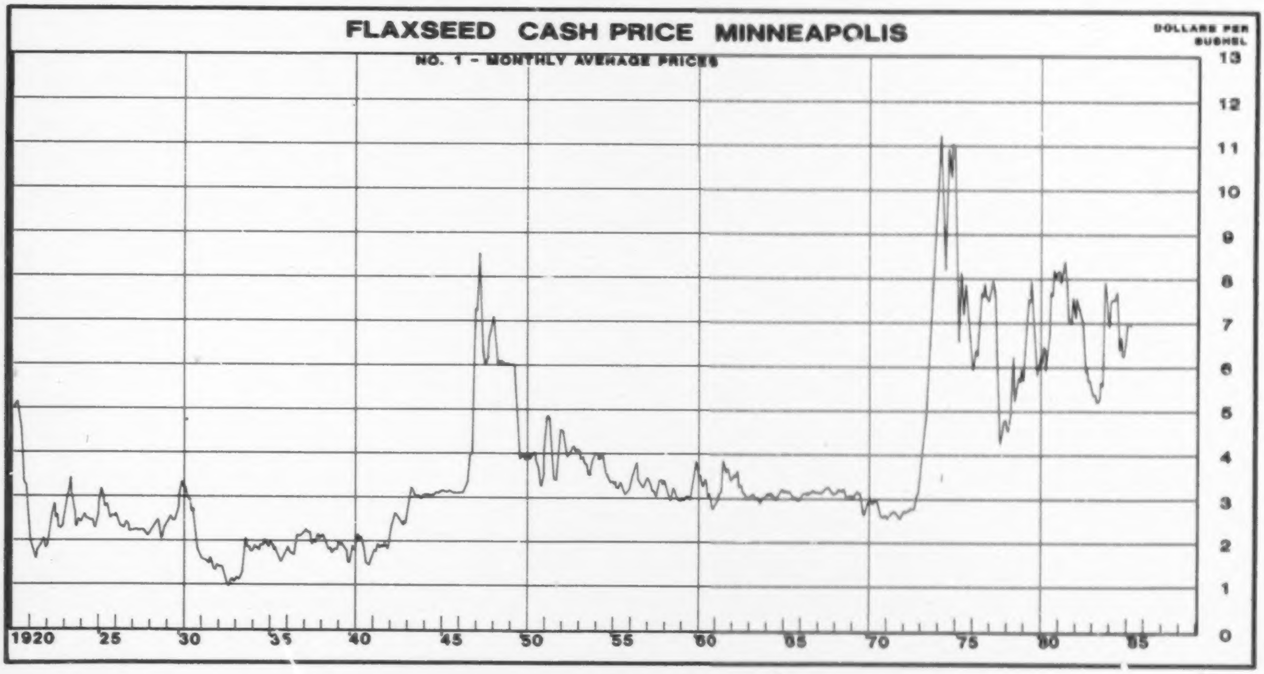
Futures Market

Flaxseed futures are traded on the Winnipeg Commodity Exchange.

World Production of Flaxseed In Thousands of Metric Tons

Crop Year	Argentina	Australia	Czechoslovakia	Canada	Ethiopia	Egypt	France	Hungary	India	Mexico	Poland	Romania	Turkey	Uruguay	United States	USSR	World Total
1976–7	750	12		277	50		16		431	8	49	50	7	46	199	337	2,347
1977–8	855	35		653	50		44		527	18	38	50	6	40	409	300	2,941
1978–9	810	28		572	50		43		527	18	38	50	6	40	277	300	2,468
1979–0	600	14		815			31		535	15	52		3	31	305	250	2,687
1980–1	610	7	15	442		27	35	10	423	8	29	44	3	21	196	196	2,096
1981–2	600	7	12	468		18	18	11	483	12	24	38	2	14	185	165	2,086
1982–3[1]	765	6	15	752		106	31	11	476	1	15	43	2	6	261	150	2,648
1983–4[2]	703		15	447		68	29	11	440	1	20	40		11	175	234	2,250
1984–5[2]	500		15	676		68	35	12	480	1	20	42		12	178	215	2,290

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.233



FLAXSEED AND LINSEED OIL

Production of Flaxseed in the United States In Thousands of Bushels

Year	Crop Production Estimates				By States					
	Aug. 1	Sept. 1	Oct. 1	Dec. 1	Minnesota	Montana	North Dakota	South Dakota	Texas	U.S. Total
1975	16,272	16,140	15,746	14,557	2,875	38	7,700	4,460	480	15,553
1976	6,776	6,967	6,951	7,356	1,950	50	4,000	1,380	440	7,580
1977	15,466	16,011	16,249	16,105	3,190	35	7,500	4,290	90	14,280
1978	11,156	11,348	11,705	10,921	2,201	—	4,025	2,188	200	8,614
1979	11,847	12,501	13,255	13,539	2,219	—	5,980	3,770	45	12,014
1980	7,060	7,700	7,940	8,128	1,563	—	2,900	3,445	20	7,728
1981	8,083	8,083	7,893	7,799	1,300	—	4,250	2,249	—	7,289
1982	10,940	11,485	11,730	11,635	1,650	—	5,873	2,755	—	10,278
1983	8,295	7,535	7,413	7,363	938	—	4,600	1,365	—	6,903
1984[1]	7,260	7,555	7,555	7,022	653	—	4,875	1,494	—	7,022

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

T.234

U.S. Supply and Distribution of Flaxseed In Thousands of Bushels

Year Beginning June	Supply							Distribution				
	Stocks, June 1											
	Farm	Terminal	All Other	Total Stocks	Imports	Production	Total Supply	Seed	Crushing	Exports	Other[2]	Total Distribution
1975-6	1,120	—1,100—		3,031	148	15,553	18,732	1,054	11,791	953	44	13,842
1976-7	1,830	—3,060—		4,890	2,168	7,580	14,638	1,043	10,677	196	−239	11,667
1977-8	1,070	—1,934—		2,961	859	14,280	18,100	557	11,615	1,001	−388	12,785
1978-9	2,890	—2,606—		5,315	1,557	8,614	15,486	724	13,009	91	−924	12,900
1979-0	977	—1,607—		2,584	1,916	12,014	16,514	650	12,425	174	−1,753	11,322
1980-1	2,681	—2,337—		5,018	2,510	7,728	15,256	547	11,927	76	27	12,447
1981-2	1,136	—1,597—		2,733	3,502	7,289	13,524	691	11,231	11	359	11,563
1982-3	1,175	— 775—		1,950	1,921	10,278	14,149	486	8,722	638	691	10,299
1983-4[1]	1,956	—1,258—		3,212	4,756	6,903	14,871	454	12,733	52	84	13,103
1984-5[3]				1,716	4,707	7,022	13,445	593		45	0	12,093

[1] Preliminary. [2] Other disappearance represents cleaning loss, waste, and residual. [3] Forecasts. *Source: Statistical Reporting Service, U.S.D.A.*

T.235

Average Price Received by Farmers for Flaxseed in the U.S. In Cents Per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]
1975-6	755	722	682	666	560	570	537	587	574	588	554	669	657
1976-7	720	704	748	708	726	700	704	720	742	752	722	637	708
1977-8	514	415	420	456	420	432	421	407	441	485	532	589	454
1978-9	524	534	531	525	539	530	567	601	648	706	737	727	574
1979-0	690	642	634	556	544	561	551	579	585	551	604	588	597
1980-1	655	702	717	710	723	759	754	748	725	735	765	747	720
1981-2	723	708	644	621	664	684	690	691	680	669	660	665	673
1982-3	625	535	537	511	495	468	486	470	460	454	469	492	519
1983-4	496	594	714	700	692	655	686	701	710	708	720	691	677
1984-5	625	607	572	567	586	605	627	665	622				

[1] Season average includes an allowance for unredeemed loans. *Source: Crop Reporting Board, U.S.D.A.*

T.236

Average Price of No. 1 Flaxseed at Minneapolis In Dollars Per Bushel

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[1]
1975-6	7.69	7.25	6.64	6.18	6.09	5.93	6.36	6.30	6.40	6.67	7.31	7.70	6.71
1976-7	7.63	7.91	7.61	7.71	7.46	7.54	7.63	7.82	7.99	7.76	6.10	5.17	7.36
1977-8	4.26	4.41	4.79	—	4.80	4.61	4.51	4.78	5.30	5.78	6.25	5.22	4.97
1978-9	5.47	5.76	5.70	5.99	5.75	6.17	6.63	7.22	7.54	7.51	7.98	7.23	6.58
1979-0	7.00	6.71	6.12	5.84	6.16	6.14	6.47	6.44	5.95	6.24	6.50	7.15	6.39
1980-1	7.70	7.65	7.82	8.23	8.04	8.17	8.19	7.93	8.11	8.42	8.06	7.85	8.01
1981-2	7.62	7.02	7.00	7.41	7.61	7.15	7.57	7.47	7.35	7.28	7.02	6.90	7.28
1982-3	5.90	5.93	5.70	5.71	5.52	5.36	5.37	5.23	5.22	5.25	5.66	5.58	5.54
1983-4	6.15	7.93	7.65	7.09	6.92	7.50	7.52	7.54	7.52	7.70	7.19	6.39	7.26
1984-5	6.68	6.25	6.26	6.51	6.76	7.00	7.00	6.91					

[1] Weighted average by carlot sales. *Source: Economic Research Service, U.S.D.A.*

T.238

Supply and Distribution of Linseed Oil in the U.S. & World Production In Millions of Pounds

Year Beginning June	Supply			Exports & Shipments	Domestic Disappearance								Production[3] in 1,000 tonnes			
					Drying Oil Products					Lubricants & Similar Oils	Fatty Acids	Total				
	Stocks June 1	Production	Total		Paint & Varnish	Linoleum & Oilcloth	Resins & Plastics	Other Inedible	Total				Total World	Argentina	India	U.S.
1977–8	88	232	320	25	177		23	15		7	3	225				
1978–9	70	259	329	54	127.7		29.5					207.5				
1979–0[1]	44	256	300	38	103.7		19.6					160.0	685	169	116	114
1980–1[2]	54	251	305	51	69.6		23.3					127.6	627	162	140	108
1981–2[2]	56	237	293	54	42.4		20.9					92.7	660	221	138	82
1982–3[2]	35												731	190	145	120
1983–4[2]	48				56.5		27.7					121.2	630	190	139	109

[1] Preliminary. [2] Estimate. [3] Oil production calculated from assumed extraction rates. *Source: Economic Research Service, U S.D.A.* T.239

U.S. Linseed Oil Consumption in Refining In Millions of Pounds

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1976–7	22.2	11.1	15.3	15.8	8.6	12.0	14.7	15.9	20.1	6.8	20.9	21.9	163.5
1977–8	23.9	22.9	13.7	10.9	8.9	3.8	15.4	15.8	23.9	21.2	42.5	21.5	224.7
1978–9	6.1	31.5	14.0	22.3	16.1	11.4	16.2	15.0	14.7	21.7	20.5	18.3	267.9
1979–0	18.4	19.9	15.8	24.3	14.9	11.4	11.7	12.3	14.6	17.1	11.6	12.2	184.2
1980–1	13.2	15.7	16.7	21.1	11.4	11.6	13.6	13.9	12.2	19.8	15.4	12.9	177.5
1981–2	21.0	16.0	15.3	15.2	N.A.	N.A.	6.5	9.6	11.5	17.5	9.9	9.0	131.5
1982–3	8.7	8.3	8.4	7.6	6.1	5.0	6.0	6.3	7.1	7.0	7.6	8.9	87.0
1983–4[1]	11.7	11.9	12.4	16.5	10.6	10.0	13.5	12.6	21.8	8.0	N.A.	N.A.	129.0
1984–5[1]	N.A.	N.A.	16.1	15.6	N.A.	N.A.	12.3	N.A.					

[1] Preliminary. *Source: Bureau of the Census* T.242

Factory Shipments of Paints, Varnish and Lacquer in the U.S. In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	476.1	484.0	622.0	567.6	677.8	668.3	638.4	678.4	588.6	648.5	526.8	448.1	7,025
1980	540.8	567.9	611.9	648.0	702.4	721.6	682.9	689.3	698.2	706.1	546.4	520.3	7,636
1981	555.1	593.2	728.1	774.5	770.8	851.8	774.4	784.8	773.2	704.2	572.0	513.6	8,396
1982[1]	544.9	579.9	711.7	741.0	791.2	835.1	744.9	672.0	660.2	440.3	485.0	424.4	7,047
1983[1]	538.8	569.9	722.8	744.8	802.4	893.5	763.4	831.2	719.5	662.2	585.0	510.2	7,844
1984[1]	628.7	676.7	764.2	758.2	843.4	844.0	789.4	838.1	672.5	695.7	577.4		

[1] Preliminary. *Source: Bureau of the Census* T.246

Wholesale Price of Raw Linseed Oil at Minneapolis in Tank Cars In Cents Per Pound

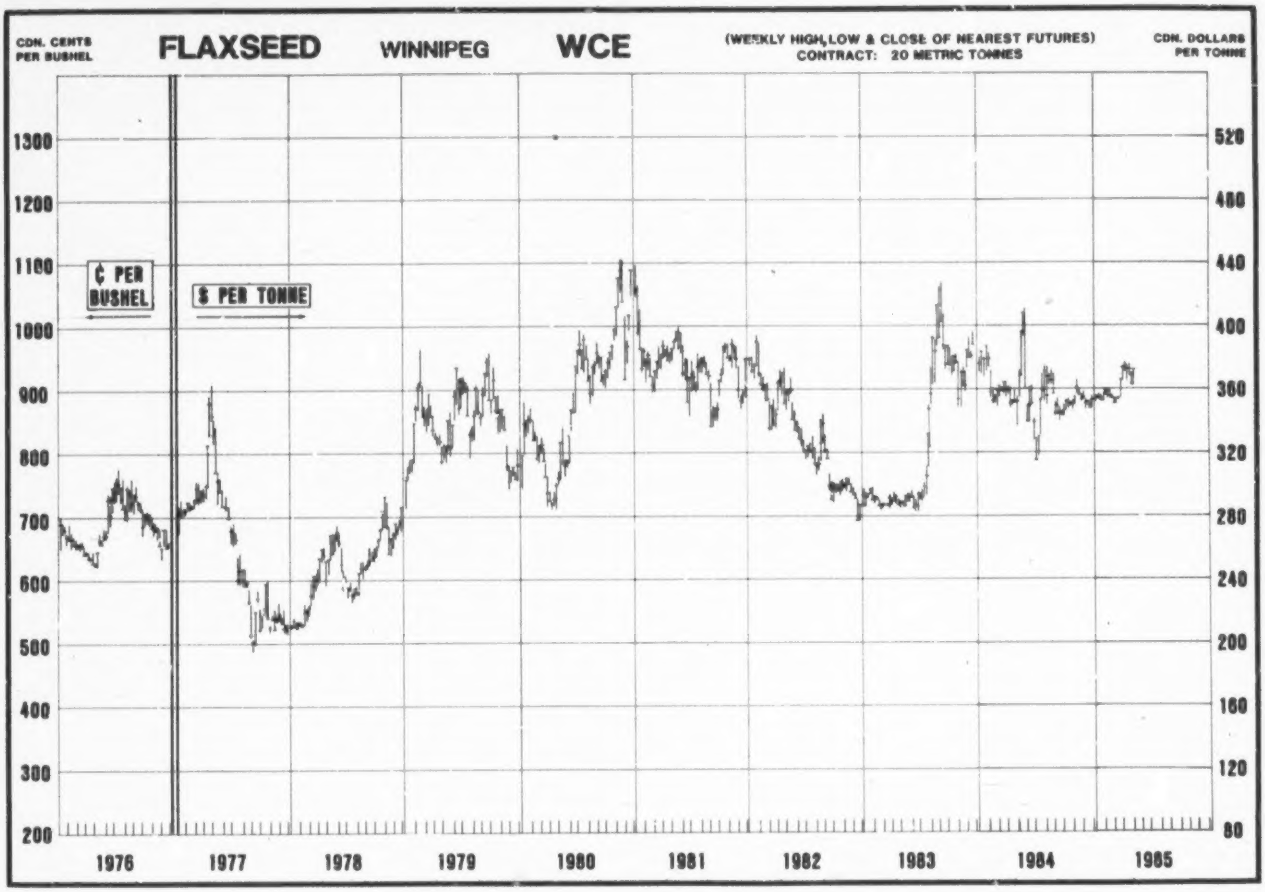
Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1977–8	28.0	28.0	27.0	22.8	20.0	20.0	26.6	26.6	26.6	—	22.0	22.0	24.5
1978–9	22.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	30.0	30.0	24.9
1979–0	30.0	30.0	32.0	32.0	32.0	32.0	32.0	28.8	28.8	27.8	26.6	27.0	29.9
1980–1	27.0	28.6	29.0	29.2	29.0	29.8	32.8	32.0	31.3	32.0	32.6	32.8	30.5
1981–2	32.8	32.3	31.8	30.8	30.0	27.6	29.5	28.5	28.2	28.0	28.0	27.0	29.5
1982–3	27.8	26.3	26.0	24.6	25.0	25.2	24.6	25.0	24.3	23.6	23.0	23.0	24.9
1983–4	22.8	25.5	31.6	34.0	31.5	32.0	32.0	32.0	31.8	32.0	33.0	34.5	31.1
1984–5	33.4	38.0											

Source: Department of Agriculture T.240

U.S. Stocks of Linseed Oil (Crude & Refined) at Factories & Warehouses In Millions of Pounds

Year	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1
1977–8	87.3	74.0	69.0	79.2	72.6	74.2	89.2	93.2	92.0	74.8	76.3	69.6
1978–9	62.6	75.6	49.9	44.8	34.4	34.8	34.9	34.8	35.5	37.4	43.6	43.9
1979–0	49.1	39.9	47.7	62.9	46.4	43.6	35.6	41.8	36.3	48.2	65.6	53.5
1980–1	42.9	45.3	35.5	52.5	43.8	34.5	45.6	50.6	53.3	34.7	42.1	56.3
1981–2	67.1	57.4	65.7	71.4	72.1	64.3	56.3	62.7	57.0	64.6	66.7	50.4
1982–3	37.4	33.9	30.5	44.6	43.0	26.8	39.0	34.1	41.8	41.6	27.1	35.1
1983–4[1]	54.7	46.5	41.7	50.4	46.0	34.9	34.1	38.0	40.3	41.5	55.2	47.6
1984–5[1]	50.7	40.8	24.9	48.3	41.3	36.1	39.3	38.4	33.3			

[1] Preliminary. *Source: Bureau of the Census* T.245



High, Low & Closing Prices of May Flaxseed Futures in Winnipeg In Canadian Dollars per Tonne

Year of Delivery		Year Prior to Delivery							Delivery Year					Life of Delivery Range
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1982	High	413.00	410.00	406.20	403.20	426.20	424.50	412.90	393.50	388.50	364.00	372.50	367.00	426.00
	Low	385.00	391.00	392.50	376.70	392.00	404.60	367.50	367.30	352.70	332.50	340.50	340.50	332.50
	Close	393.00	396.00	399.60	397.00	422.50	414.50	378.50	390.10	361.50	343.70	350.00	340.50	—
1983	High	385.00	374.00	369.50	369.20	332.70	325.00	318.00	304.50	304.00	299.50	294.50	294.50	385.00
	Low	373.50	355.00	347.10	326.60	318.10	316.00	288.30	290.90	289.20	288.00	286.80	285.30	285.30
	Close	373.50	355.10	364.50	326.60	318.30	317.70	293.50	304.00	289.30	291.00	287.00	288.80	—
1984	High	—	—	409.0	454.0	416.0	402.9	408.0	390.1	386.2	366.0	362.3	408.0	454.0
	Low	—	—	352.0	407.0	391.5	369.0	377.5	370.0	350.0	353.0	347.0	337.5	337.5
	Close	—	—	408.0	415.5	391.5	381.0	392.6	382.5	353.0	359.0	347.5	376.5	—
1985	High	385.0	394.0	402.5	382.5	380.5	384.5	377.5	363.7	366.8	366.0			
	Low	365.0	356.0	380.6	372.0	371.5	371.3	361.0	358.8	361.0	357.0			
	Close	376.5	385.6	389.0	375.5	371.8	376.0	361.0	362.0	362.5	365.5			

Source: Winnipeg Commodity Exchange

T.243

Month End Open Interest of Flaxseed Futures in Winnipeg In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	6,339	7,201	7,714	7,214	4,897	4,976	4,390	6,041	6,306	5,783	6,493	4,097
1983	4,759	5,261	4,128	5,039	4,552	3,697	3,321	2,520	3,953	3,345	6,282	6,091
1984	6,509	6,964	5,100	5,944	4,509	3,943	5,140	6,164	5,853	4,490	5,618	5,162
1985	5,408	5,927	6,281									

Source: Winnipeg Commodity Exchange

T.244

Gas

As competition between natural gas and other fuels intensified in 1984, the rapid rise in natural gas prices slowed considerably. Wellhead prices, residential sector prices, and utility sector prices for natural gas all increased by nearly 1–2 percent during the year, and trade sources estimated U.S. natural gas consumption in 1984 at 18.6 trillion cubic feet, up 7 percent from the 1983 level. Aggregate consumption by the industrial sector and by electric utilities increased more rapidly than aggregate consumption in the residential and commercial sectors. To meet this increased demand, U.S. natural gas production increased to 17.5 trillion cubic feet in 1984, 10 percent over 1983 production.

Trade sources also estimated world natural gas reserves at 3,400.7 trillion cubic feet at the beginning of 1985. This implied that world reserves increased nearly 54 trillion cubic feet during 1984. U.S. imports of natural gas increased only slightly to less than one trillion cubic feet, or 5 percent of U.S. consumption. Most of these imports originated in Canada.

Natural gas prices were expected to increase in 1985. Although the 1985 increase could be as much as twice the 1984 price gain, 1985 price increases were still projected as being small relative to the previous year. The following market pressures were expected to keep gas price gains modest during 1985: Public utility commissions in many states allowed natural gas (at the burner tip) to be priced more competitively with heating oil and with fuel oil in markets that have fuel-switching capability. Producers have tended to renegotiate contracts in order to maintain or increase their market share during periods of relatively weak demand, thus settling for reduced prices. It was estimated that significant excess deliverability existed in the domestic gas market. Also, recent changes in Canadian energy policies allowed Canadian exporters to negotiate the price and volume of their exports; price cuts on Canadian gas occurred in 1983 and 1984 and were looked for again in 1985

Overall, the price of natural gas was expected to increase by about 2 percent in 1985, and the price to utilities was expected to rise by 4 percent. These increases, in conjunction with a projected virtual absence of price increases for crude oil and petroleum products indicate that the competition between natural gas and fuel oil can be expected to intensify in 1985.

Both the consumption and the production of natural gas were expected to increase in 1985, but, again, increases were likely to be moderate. Consumption will probably be somewhat constrained by slightly higher prices, and it was anticipated that 1985 consumption would move upward by about 1 percent. Consumption by utilities could decline by 1 percent while consumption by all other users could increase by 2 percent. Production of natural gas in 1985 was expected to increase by only 200 billion cubic feet, or less than 2 percent.

World Natural Gas Production (Marketed Production[3]) In Thousands of Terajoule[4]

Year	Argentina	Canada	France	Indonesia	W. Germany	Iran	Italy	Mexico	Netherlands	Poland	Romania	United Kingdom	United States	USSR	Venezuela	Australia
1976	268	2,820	279	115	676	788	600	515	3,422	243	1,384	1,491	20,552	11,194	497	231
1977	271	2,962	299	162	673	743	524	538	3,067	249	1,465	1,536	18,921	12,102	510	264
1978	256	2,856	307	353	720	668	524	669	3,048	244	1,475	1,458	18,846	12,967	528	274
1979	303	3,041	303	482	729	700	581	803	3,100	224	1,409	1,470	19,415	14,160	601	303
1980	327	2,790	289	607	632	279	476	893	3,012	193	1,455	1,379	19,252	15,168	643	351
1981	340	2,748	277	653	680	247	536	945	2,664	187	1,532	1,374	19,052	16,215	647	406
1982	393	2,825	341	646	577	363	555	1,270	2,280	167	1,640	1,526	17,639	17,414	650	432
1983[1]	457	2,739	379	844	629		498	1,000	2,422	193	1,680	1,577	15,865	18,628		443
1984[2]	430	2,800	390	1,000	600		525	980	2,400	210		1,300	17,000	19,500		470

[1] Preliminary. [2] Estimate. [3] Comprises all gas collected & utilized as fuel or as a chemical industry raw material, including gas used in oilfields and/or gasfields as a fuel by producers. [4] Terajoule = 10^{12} Joule = approx. 10^9 BTU. *Source: United Nations* T.247

United States Recoverable Reserves and Deliveries of Natural Gas In Billions of Cubic Feet

Year	Recoverable Reserves of Natural Gas Dec. 31[3]	Deliveries									
		Residential	Commercial	Lease & Plant Fuel	Carbon Black	Petroleum Refineries	Used as Pipeline Fuel	Industrial	Other Consumers	Total Deliveries	Electric Utility Plants[2]
1974	237,132	4,786	2,556	1,477	40	1,040	669	8,292		19,077	3,443
1975	228,200	4,924	2,508	1,396	26	946	583	6,968		17,558	3,158
1976	216,026	5,051	2,668	1,634	28	919	548	6,964	285	17,764	3,081
1977	208,878	4,821	2,501	1,659	28		533	6,815	257	17,329	3,191
1978	200,302	4,903	2,601	1,648			530	6,757	291	17,449	3,188
1979	194,600	4,965	2,786	1,499			601	6,899	301	18,141	3,491
1980		4,752	2,611	1,026			635	7,172		18,216	3,682
1981		4,546	2,520	928			642	7,128		17,834	3,640
1982[1]		4,633	2,606	1,109			596	5,831		16,295	3,226
1983[1]		4,381	2,433	978			490	5,643		15,367	2,911
1984[4]		4,331	2,370	1,051			508	6,112		15,930	3,113

[1] Preliminary. [2] Figures include gas other than natural (impossible to segregate); therefore, shown separately from other consumption. [3] Estimated proved recoverable reserves. [4] Estimated. *Source: U.S. Dept. of Energy* T.251

Gas Utility Sales in the United States by Types & Class of Service In Millions of Therms

			Class of Service				Revenue—Mil. $				
Year	Total Utility Sales	No. of Cust. (Mil.)	Residential	Commercial	Industrial	Other	Total	Residential	Commercial	Industrial	Other
1973	164,799	43.7	49,936	22,808	83,708	8,347	12,987	6,247	2,172	4,197	371
1974	160,003	44.3	48,648	22,934	81,532	6,890	15,242	6,899	2,539	5,391	413
1975	148,629	44.6	49,910	23,868	68,371	6,480	19,074	8,445	3,303	6,718	608
1976	148,135	44.9	50,142	24,266	71,070	2,696	23,701	9,941	4,075	9,374	311
1977	143,409	45.7	49,463	24,094	67,107	2,746	28,303	11,541	4,980	11,385	397
1978	147,480	46.0	51,070	25,000	68,410	3,010	32,150	12,939	5,696	13,065	451
1979	154,400	46.7	50,830	24,860	75,550	3,160	38,947	14,833	6,624	17,045	446
1980	154,190	47.4	48,190	24,444	79,555	2,020	48,312	17,408	8,159	22,213	532
1981	153,380	48.0	46,010	23,600	82,220	1,990	56,340	19,218	9,231	27,246	645
1982	141,830	48.5	47,700	24,710	67,940	1,470	63,200	23,700	11,666	27,200	634
1983[1]	128,590	48.9	44,500	22,980	59,700	1,400	65,837	26,173	12,659	26,315	690
1984[2]	130,000	49.0	40,000	21,000	58,000	1,300	65,000	27,000	12,000	25,000	600
1985											

[1] Preliminary. [2] Estimate. *Source: American Gas Association* T.253

Salient Statistics of Natural Gas in the United States

	In Billions of Cubic Feet										Avg. Value Delivered to Consumers—$ Per Ths. Cu. Ft.				
	Supply				Disposition										
Year	Marketed Production	Storage Withdrawals	Import (Consumed)	Total Supply	Consumption	Exports	Stored	Extraction Loss	Adjustments	Total Disposition	Wellhead Price	Imports	Residential	Industrial Sales	Electric Utilities
1973	22,648	1,533	1,033	25,213	22,049	77	1,974	917	196	25,213	.22	N.A.	1.29	.98	.35
1974	21,601	1,701	959	24,260	21,223	77	1,784	887	289	24,260	.30	N.A.	1.43	1.12	.49
1975	20,109	1,760	953	22,821	19,538	73	2,104	872	235	22,821	.45	N.A.	1.71	1.40	.77
1976	19,952	1,921	963	23,030	19,946	65	1,756	854	216	22,837	.58	N.A.	1.98	1.69	1.06
1977	20,025	1,750	1,011	22,809	19,521	56	2,307	863	41	22,786	.79	N.A.	2.35	2.10	1.33
1978	19,974	2,158	966	23,126	19,627	53	2,278	852	287	23,097	.91	2.21	2.56	1.54	1.48
1979	20,471	2,047	1,253	22,964	20,241	56	2,295	808	372	23,772	1.18	2.60	2.98	2.01	1.80
1980	20,180	1,972	985	22,515	19,877	49	1,949	777	640	23,292	1.59	4.42	3.68	2.53	2.28
1981	19,956	1,930	904	22,191	19,404	59	2,228	775	501	22,967	1.98	4.84	4.29	3.11	2.91
1982	18,520	2,165	933	21,001	18,001	52	2,472	762	475	21,762	2.46	4.94	5.17	3.73	3.49
1983[1]	16,822	2,270	920	19,354	16,835	55	1,822	790	642	20,144	2.59	4.51	6.06	4.26	3.58
1984[2]	18,065	2,038	861	20,254	17,489	55	2,249	849	462	21,104	2.63	4.21	6.06	4.10	3.62
1985															

[1] Preliminary. [2] Estimate. [3] Total value of market production at the wellhead. *Source: U.S. Dept. of Energy* T.248

United States Marketed Production[1] of Natural Gas In Billions of Cubic Feet

Year	Arkansas	California	Kansas	Alaska	Louisiana	Mississippi	Montana	New Mexico	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Wyoming	Michigan
1972	167	487	889	126	7,973	104	33	1,216	90	1,807	74	8,658	215	375	
1973	158	449	893	131	8,242	100	56	1,219	94	1,771	79	8,514	209	358	
1974	124	365	887	129	7,754	79	55	1,245	92	1,639	83	8,171	202	327	
1975	116	318	844	160	7,091	70	41	1,217	85	1,605	85	7,486	154	316	102
1976	110	354	829	166	7,007	71	43	1,231	89	1,727	89	7,192	153	329	119
1977	104	311	781	188	7,215	83	47	1,203	99	1,770	92	7,051	153	330	130
1978	107	311	854	203	7,476	107	47	1,174	114	1,774	98	6,548	149	357	148
1979	109	248	798	221	7,266	144	54	1,181	123	1,835	96	7,175	151	414	160
1980[2]	112	264	732	226	6,937	165	54	1,142		1,892		7,169	152	382	153

[1] Comprises gas either sold or consumed by producers, including losses in transmission, quantities added to storage and increases of gas in pipelines. [2] Preliminary. *Source: U.S. Dept. of Energy* T.250

Gasoline

Motor gasoline is a complex mixture of relatively volatile hydrocarbons with or without small quantities of additive that have been blended to form a fuel suitable for use in spark ignition engines. Gasoline includes premium and regular grades, both leaded and unleaded, as well as gasohol and other refinery products. The category of gasoline does not include any blendstock until blending has been completed and the blendstock is completely incorporated in the finished gasoline. Premium grade motor gasoline is a finished motor gasoline that has an antiknock designation of 3 or more for unleaded motor gasoline and 4 or more for leaded motor gasoline. Regular grade motor gasoline has an antiknock designatioin of 2 or less for unleaded motor gasoline and 3 or less for leaded motor gasoline.

In recent years, motor gasoline has accounted for nearly half of the total of petroleum products supplied. However, the demand for motor gasoline is not readily explicable by weather patterns and changes towards hotter summers and colder winters as is the case with other major petroleum products. Gasoline consumption is primarily a function of automobile travel, which tends to peak during the summer (a popular vacation season) and in December (due to holiday travel), regardless of weather.

Production in the U.S. of finished motor gasoline during 1984 averaged 6.47 million barrels per day compared with the 1983 average of 6.34 million barrels per day. The amount produced reached its peak in the May–June period of the year as summer automobile travel increased. As was the case during the previous two years, the amount of finished motor gasoline supplied generally kept pace with total production. During 1984, the amount of gasoline supplied averaged 6.72 million barrels per day compared with an average of 6.62 million barrels a year earlier. About a half to two-thirds of product supplied was accounted for by unleaded gasoline.

U.S. ending stocks of finished motor gasoline generally maintained the levels of the previous two years with the most noticeable drawdown occurring in the late summer months. On the average, however, stocks of finished motor gasoline were increased at the rate of 40,000 barrels per day compared to an average withdrawal of stocks in 1983 amounting to 45,000 barrels per day. This tendency toward a buildup of gasoline stocks in 1984 reflected a falling demand for petroleum products that contributed to sharply falling energy complex prices during the year. Ending stocks of total motor gasoline were steady around the 1983 level. However, 1984 ending stocks of finished motor gasoline were slightly larger than a year earlier.

During 1984, U.S. imports of gasoline increased to an average of 290,000 barrels per day, the highest average level since 1973. Average exports continued negligible.

Sales of new cars in the U.S. have recovered significantly from the depressed 1982 level. U.S. new car sales in 1985 are expected to remain strong, reaching 11.0 million units, 4.8 percent above 1984 sales. Sales of domestic makes are expected to increase slightly to 8.2 million units, and import sales are expected to increase from 2.4 to 2.8 million units. Sales of light trucks are projected as reaching 3.8 million units in 1985. This would represent an 8.0 percent increase from estimated 1984 sales.

Futures Market

Futures contracts based on New York Harbor leaded regular gasoline are traded on the New York Mercantile Exchange (NYMEX). The NYMEX introduced an unleaded gasoline contract in 1984.

High, Low & Closing Prices of December Leaded Regular Gasoline Futures In New York In Cents Per Gallon

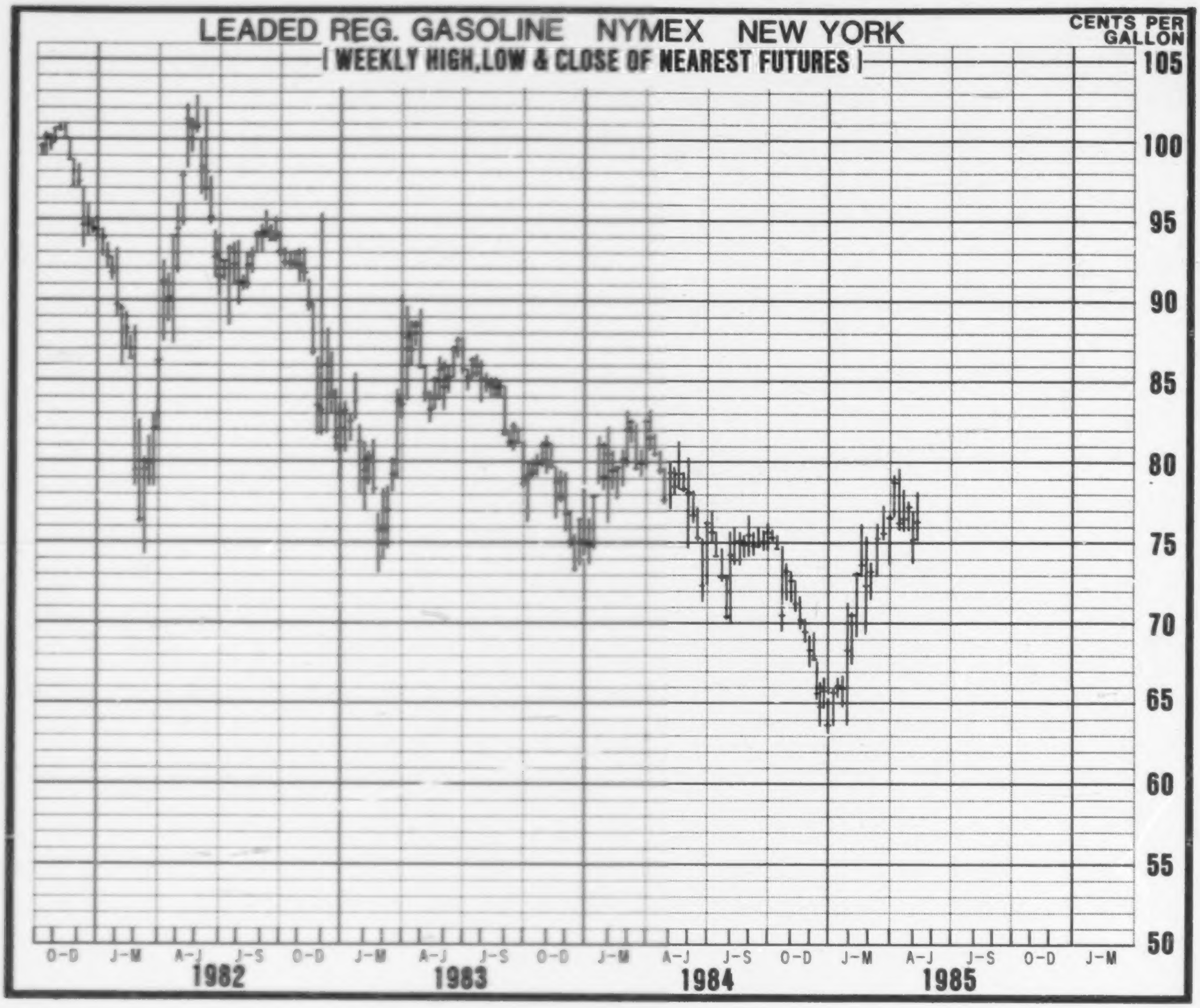
Year of Delivery		Yr. Prior to Delivery			Delivery Year											Life of Delivery Range
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	
1983	High	99.25	96.50	87.15	84.05	79.70	77.50	82.00	81.00	82.75	83.50	84.10	81.90	80.40	81.70	99.25
	Low	96.50	88.50	83.00	79.40	71.75	71.00	77.00	75.20	77.75	80.25	81.70	78.30	76.00	76.50	71.00
	Close	96.50	88.50	83.00	79.40	72.00	76.50	80.00	78.70	81.60	83.30	81.95	78.53	79.98	76.86	—
1984	High	—	—	—	—	—	—	—	80.30	79.60	76.75	77.35	76.60	76.40	73.00	80.30
	Low	—	—	—	—	—	—	—	79.20	75.80	71.40	73.05	74.90	69.08	67.30	67.30
	Close	—	—	—	—	—	—	—	79.20	77.25	72.30	75.95	76.10	72.50	68.15	—
1985	High	78.10	74.00	72.50	68.90	71.45	74.75	75.25								
	Low	72.20	69.61	67.55	65.35	68.80	69.75	70.00								
	Close	73.25	71.05	69.50	68.70	69.25	74.75	70.00								

Source: N.Y. Merchantile Exchange T.0575

High, Low & Closing Prices of December Unleaded Regular Gasoline Futures In New York In Cents Per Gallon

Year of Delivery		Yr. Prior to Delivery			Delivery Year											Life of Delivery Range
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	
1985	High	—	—	—	—	—	77.00	78.00								
	Low	—	—	—	—	—	72.75	72.00								
	Close	—	—	—	—	—	77.00	72.00								

Source: N.Y. Mercantile Exchange T.0575A



Month End Open Interest of Unleaded Regular Gasoline Futures In New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1984				FUTURES TRADING BEGAN DEC. 3, 1984								1,243
1985	2,429	1,464	3,411	4,977								

Source: N.Y. Mercantile Exchange

T.0576

Month End Open Interest of Leaded Regular Gasoline Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	1,228	970	1,051	1,334	2,694	3,232	2,668	2,713	3,803	4,503	3,887	4,732
1983	6,826	9,646	11,450	12,564	11,852	12,920	11,624	11,584	12,984	10,290	12,918	19,335
1984	20,248	18,212	18,013	14,455	15,423	15,523	11,988	11,747	10,391	7,826	7,966	9,230
1985	8,779	10,413	12,776	12,355								

T.0576A

Gold

Total world production of gold in 1984 was estimated at 45.0 million troy ounces, nearly one percent above 1983 production. As in 1983, South Africa produced about a half of the world's gold during the year. In addition to mine reserves, the world's aboveground stocks totaled at least 2.1 billion ounces, of which 1.14 billion ounces were official stocks of the market economy countries, 0.9 billion ounces were privately held, and 0.07 billion ounces were estimated official stocks of centrally planned economy countries.

The rapid pace of new gold discoveries and mine openings in the U.S. during recent years slowed somewhat during 1984 as companies pursued the development of earlier finds. Gold exploration continued at a brisk pace in favorable areas. Increases in gold mine production more than offset declines in byproduct gold from recently curtailed copper mine production. Reported consumption of gold in 1984 increased only marginally from the previous year. It was estimated that in 1985 domestic mine production of gold will be nearly 3 million ounces and U.S. apparent consumption would be about 4.9 million ounces. Figured from a 1981 base, the demand for gold was expected to increase at an average annual rate of about 2 percent through 1990.

U.S. mine production of gold in 1984 was estimated at 2.30 million troy ounces compared with 1.96 million mined in 1983. Secondary refinery production in the U.S. was up only fractionally to 3.00 million ounces during the year, while primary refinery production was little changed at 0.80 million ounces. Of an estimated 3 million ounces of gold reclaimed from scrap in 1984, about 1.7 million ounces was from old scrap. The balance was from prompt industrial scrap, partly toll-refined. Old scrap supplied about 53 percent of the gold consumed.

Gold futures prices fell steadily during 1984, reaching downside targets of $300 per ounce by the end of the year. The decline was influenced by weak industrial growth throughout the world during the year and by the record strength of the dollar which led to dropping prices for commodities and to the anticipation of a continued reduction in inflation rates. At the same time, industrial demand failed to keep pace with a slight recovery in the world economy in the last part of the year, and there were reports of increased gold sales by South Africa in order to improve its balance of payments situation. Gold sales by the Soviet Union, however, were reportedly reduced significantly in 1984 compared with recent years in which the Soviet sold between 200 and 480 tonnes of gold per year.

Some analysts estimated that the 1984 surplus of gold available to investors during 1984 could total 165 tonnes, after subtracting demand for coins and for fabrication, compared with 297 tonnes in 1983. The comparable 1985 gold surplus was expected to be unchanged from the 1984 level.

The possibility of a substantial decline in the dollar in 1985 and a resulting increase in inflation rates was expected to boost gold prices by a factor greater than a simple adjustment for exchange rate values. Also, any increases in the gold supply during 1985 were expected to be modest and possibly offset by increases in fabrication demand. Industrial demand overall was likewise expected to continue to increase into 1985. The prospect of an easier Federal Reserve monetary policy because of the world trade problems associated with the soaring dollar was additionally expected to bring down interest rates somewhat and to reduce the cost of carrying gold positions. The possibility of a sudden increase in gold sales by the Soviet Union was expected to create some downside risk for gold owners during 1985.

Futures Markets

Gold futures in the U.S. are traded on the Commodity Exchange, Inc. (Comex) in New York, the International Monetary Market (IMM) and the Mid-America Commodity Exchange in Chicago. Futures trading is also conducted in Winnipeg, Hong Kong, and Tokyo. Gold futures options are traded on Comex.

World Mine Production of Gold In Thousands of Fine Ounces (Troy Ounces)

Year	Australia	Zaire (Congo)	Canada	China	Colombia	Ghana	India	Japan	Mexico	Nicaragua	Papua N. Guinea	Philippines	Zimbabwe	South Africa	United States	USSR[1]	Total World[1]
1971	672	172	2,243		189	698	119	255	151	121		637	502	31,389	1,495	6,700	46,495
1972	755	141	2,079		188	724	106	243	146	112		607	502	29,245	1,450	6,900	44,843
1973	554	134	1,954		216	723	105	188	133	85		572	800	27,495	1,176	7,100	43,297
1974	513	131	1,698		265	614	101	140	134	83		538	800	24,388	1,127	7,300	40,124
1975	527	103	1,654		309	524	91	144	145	70		503	600	22,938	1,052	7,500	38,476
1976	503	91	1,692		300	532	101	138	163	76		501	387	22,936	1,048	7,700	39,024
1977	625	80	1,734		257	481	97	149	213	66	740	559	402	22,502	1,100	7,850	38,906
1978	648	76	1,735	150	246	402	89	145	202	74	751	587	399	22,649	999	8,000	39,057
1979	597	73	1,644	200	269	357	85	128	190	61	630	535	388	22,617	964	8,160	38,830
1980	548	41	1,627	225	510	353	79	102	196	60	452	644	368	21,669	970	8,300	39,205
1981	591	64	1,673	1,700	529	341	80	99	203	62	540	753	371	21,121	1,379	8,425	41,249
1982[2]	867	62	2,081	1,800	482	331	72	104	196	52	564	834	426	21,355	1,466	8,550	43,057
1983[1]	1,035	60	2,274	1,900	429	303	69	101	209	47	582		430	21,847	1,957	8,600	44,533
1984[1]	1,100		2,500	2,000										22,000	1,902	8,600	45,000

[1] Estimated. [2] Preliminary. *Source: U.S. Bureau of Mines*

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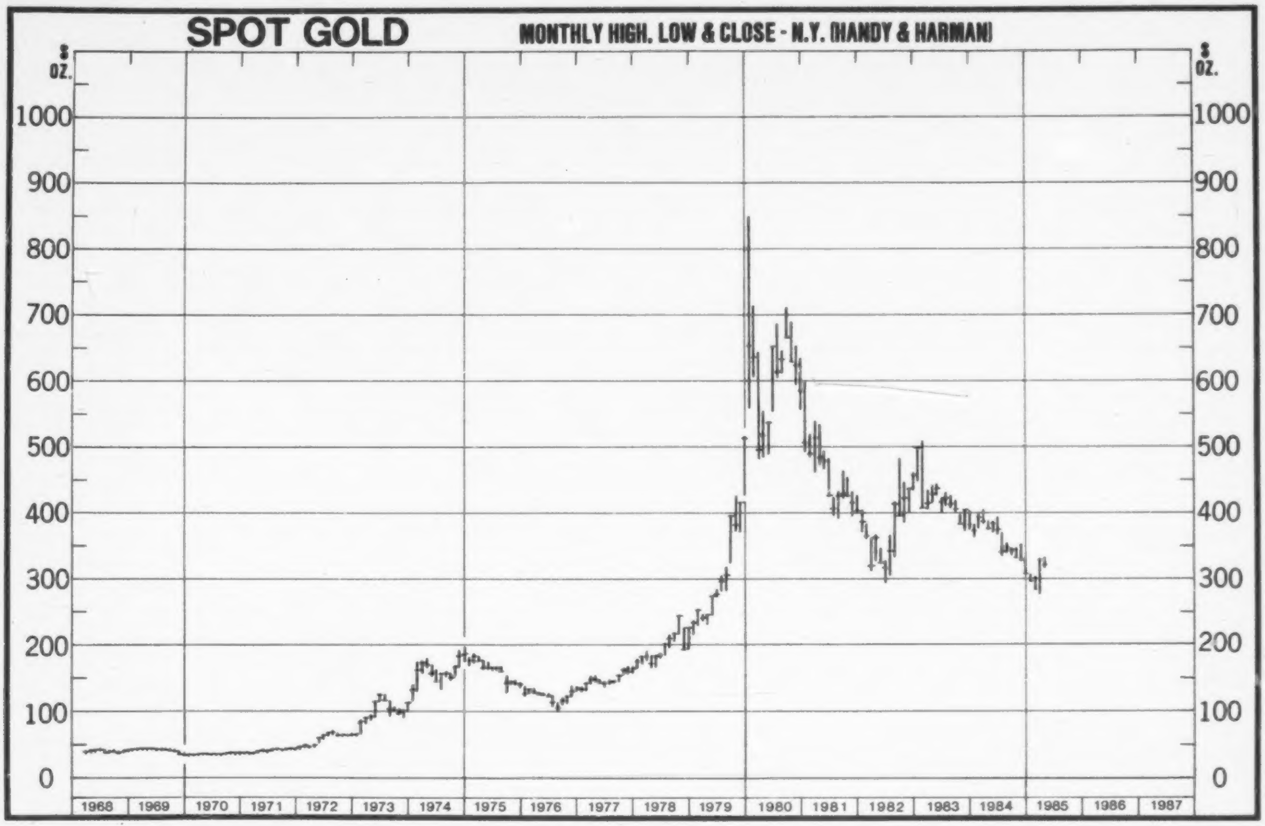

Salient U.S. Gold Statistics In Thousands of Troy Ounces

Year	Mine Production	Value Mil. $	Refinery Prod. New (Domestic)	Secondary[8]	Exports[2]	Imports[2] For Consumption	Stocks, Dec. 31 Treas. Dept.[6]	Futures Exch.	Earmarked[7]	Industrial	Consumption Dental	Industrial[3]	Jewelry & Arts	Total	Price $ Per Troy Oz.[4]
1977	1,100	163.2	956	2,454	8,671	4,454	277.6	1.8	378.7	2.0	728	1,209	2,658	4,863	148.31
1978	999	193.3	962	3,085	5,509	4,690	276.4	2.7	366.2	1.7	706	1,313	2,651	4,738	193.55
1979	964	296.6	795	2,883	16,492	4,630	264.6	2.5	359.3	.9	646	1,406	2,688	4,785	307.50
1980	970	594.1	773	3,824	6,119	4,542	264.3	5.0	354.5	.9	341	1,287	1,505	3,215	612.56
1981	1,379	633.9	801	3,085	6,437	4,652	264.1	2.4	350.6	.6	314	1,210	1,730	3,276	459.64
1982	1,466	551.0	718	3,040	2,970	4,920	264.0	2.3	348.6	.8	358	1,102	1,954	3,423	375.91
1983[1]	1,957	829.9	885	2,960	3,139	4,593	263.4	2.5	341.4	.6	360	1,028	1,668	3,060	424.00
1984[5]	1,902	686.0	748	2,942	4,981	7,869	262.8	2.4	337.9	.8	364	1,070	1,685	3,124	360.66

[1] Preliminary. [2] Excludes coinage. [3] Including space & defense. [4] Engelhard selling quotations. [5] Estimate. [6] Includes gold in Exchange Stabilization Fund. [7] Gold held for foreign & international official accounts at N.Y. Fed. Reserve Bank. [8] Old & new scrap. *Source: Bureau of Mines*

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Commodity Exchange Inc. (COMEX) Warehouse Stocks of Gold In Thousands of Ounces

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1977	291.8	364.2	359.0	379.9	409.3	454.1	466.7	522.4	601.8	601.2	946.4	1,788
1978	1,822	2,084	2,480	2,736	2,883	2,864	2,796	2,894	2,870	2,734	2,780	2,629
1979	2,604	2,566	2,540	2,501	2,286	2,443	2,700	2,480	2,509	2,512	2,281	2,277
1980	2,253	2,445	2,575	2,897	3,097	3,291	3,386	3,597	3,619	3,832	4,873	5,099
1981	4,814	4,570	4,192	3,897	3,513	3,585	3,417	3,258	2,887	2,776	2,605	2,494
1982	2,366	2,339	2,267	2,196	2,198	2,181	2,047	1,980	1,982	1,971	1,985	2,137
1983	2,247	2,621	2,754	2,645	2,636	2,723	2,630	2,648	2,570	2,538	2,500	2,485
1984	2,481	2,472	2,408	2,452	2,412	2,426	2,376	2,395	2,387	2,391	2,349	2,366
1985	2,308	2,308	2,273	2,109								

Source: Commodity Exchange, Inc.—N.Y.

T.263

High, Low & Closing Prices of December Gold Futures on COMEX In Dollars per Ounce

Year of Delivery		Year Prior to Deliv.			Delivery Year												Life of Delivery Range
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1981	High	814.0	779.0	753.0	690.0	585.5	605.7	585.5	549.0	523.5	453.0	463.0	482.4	469.0	436.0	428.5	981.0
	Low	733.5	695.0	640.0	551.0	538.0	497.2	512.0	502.0	445.5	417.0	405.0	428.0	426.5	392.5	394.5	392.5
	Close	750.2	738.7	680.1	563.4	536.5	562.1	529.5	518.6	449.5	423.2	443.5	443.0	431.2	408.3	393.3	—
1982	High	539.0	500.0	478.0	455.0	433.0	399.5	402.5	375.8	360.0	385.3	441.0	509.0	465.0	443.5	459.5	675.9
	Low	493.0	437.0	441.0	410.0	396.0	340.0	352.0	342.0	311.5	322.5	340.2	396.0	390.0	398.0	431.1	311.5
	Close	496.6	454.1	446.5	428.3	397.8	357.6	369.8	343.0	333.2	355.5	418.5	404.8	423.0	442.6	458.2	—
1983	High	503.0	486.0	505.5	553.0	553.5	467.5	472.0	472.5	442.8	455.0	441.0	429.0	408.8	408.8	404.0	554.7
	Low	433.0	437.5	470.0	486.5	453.4	431.5	444.5	432.0	414.0	423.0	418.5	401.0	378.0	373.0	372.0	366.7
	Close	465.0	486.4	489.0	551.7	453.4	442.4	453.5	432.6	432.3	427.4	424.8	407.8	378.8	403.0	379.0	—
1984	High	450.0	452.0	443.5	419.7	434.0	439.5	416.5	414.0	422.0	389.8	369.0	356.3	355.8	353.5	332.6	608.0
	Low	419.5	412.1	411.0	393.0	405.0	414.0	399.5	392.0	385.5	345.0	349.0	341.6	333.5	325.0	304.7	304.7
	Close	411.1	445.1	421.4	404.9	426.9	416.4	401.1	410.4	391.6	350.3	358.0	351.3	336.0	329.1	312.1	—
1985	High	398.0	389.0	364.5	332.0	327.0	357.0										
	Low	370.0	355.0	330.0	317.8	301.5	306.0										
	Close	372.2	360.7	333.9	325.2	307.5	349.2										

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

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Gold Total Open Interest at New York (COMEX) & Chicago IMM[1] In Thousands of Contracts

Year	At New York (COMEX)												At Chicago (IMM)[1]			
	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Apr. 1	July 1	Oct. 1
1980	240.1	170.1	163.6	131.8	125.0	108.8	169.3	152.4	166.0	208.4	252.9	254.4	79.6	27.0	60.0	79.9
1981	295.5	211.4	202.5	180.8	187.9	198.6	214.7	215.9	203.1	198.6	202.6	187.3	88.6	54.8	78.5	56.5
1982	175.6	153.0	145.8	134.8	134.6	131.2	139.1	119.0	119.0	110.6	112.6	121.8	33.1	18.7	14.1	8.0
1983	127.7	120.4	123.7	91.6	105.2	109.8	113.4	104.7	114.0	123.4	134.9	126.6	7.9	5.2	4.9	3.3
1984	139.7	121.6	140.8	120.8	134.3	147.0	134.9	132.2	139.4	141.7	161.0	158.2	1.4	.6	.2	.2
1985	170.3	135.0	145.7	119.2									2.4	1.9		

[1] Beginning Jan. 1, 1985 Data is for "Kylo" gold at CBT. *Source: Commodity Exch., Inc. of N.Y. (COMEX), International Monetary Market of Chicago (IMM)* & Chicago Board of Trade.

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Total Volume of Trading of Gold Futures at New York (COMEX) In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1980	829.3	378.3	560.0	316.1	391.2	652.7	747.2	460.5	839.5	863.5	938.4	1,024.7	8,001
1981	943.6	708.7	994.5	695.7	782.6	780.1	836.5	862.1	1,063.4	769.0	886.8	1,050.5	10,374
1982	922.4	669.0	1,264.7	966.3	708.7	943.3	1,153.5	1,182.7	1,224.7	1,074.1	1,044.2	1,116.6	12,289
1983	1,369.0	1,047.4	1,087.6	712.7	872.2	839.9	818.6	684.1	694.1	832.7	780.5	643.8	10,383
1984	749.3	786.5	829.8	563.2	833.7	737.8	1,006.9	791.3	753.2	671.3	814.9	577.7	9,122
1985	950.3	589.9	962.8										

Source: Commodity Exchange, Inc.—N.Y. (COMEX)

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U.S. Mine Production of Recoverable Gold In Thousands of Troy Ounces

Year	Alaska	Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	South Dakota	Utah	Other States	Total U.S.
1980	12.9	79.6	4.1	39.4	[2]	48.4	278.5	15.8	267.6	179.5	40.0	969.8
1981	26.5	100.3	6.3	51.1	[2]	54.3	524.8	65.7	278.2	227.7	44.3	1,379.2
1982	30.5	61.1	10.5	64.6	[2]	75.2	757.1	[2]	185.0	174.9	106.8	1,465.7
1983	34.7	62.0	38.4	63.1	[2]	161.4	920.3	[2]	309.8	238.5	129.2	1,957.4
1984[1]	[2]	50.3		72.8	[2]	182.9	940.2	[2]	295.9	[2]	359.8	1,901.9

[1] Preliminary. [2] Included in "OTHER STATES." *Source: Bureau of Mines*

T.262

U.S. Monetary Stock of Gold at End of Month In Billions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1981	11.159	11.156	11.154	11.154	11.154	11.154	11.154	11.154	11.152	11.152	11.151	11.151
1982	11.151	11.150	11.150	11.149	11.149	11.149	11.149	11.148	11.148	11.148	11.148	11.148
1983	11.144	11.139	11.138	11.135	11.132	11.131	11.131	11.128	11.128	11.126	11.123	11.121
1984	11.120	11.116	11.111	11.109	11.104	11.100	11.099	11.098	11.097	11.096	11.096	11.096
1985	11.095											

Source: Federal Reserve Board

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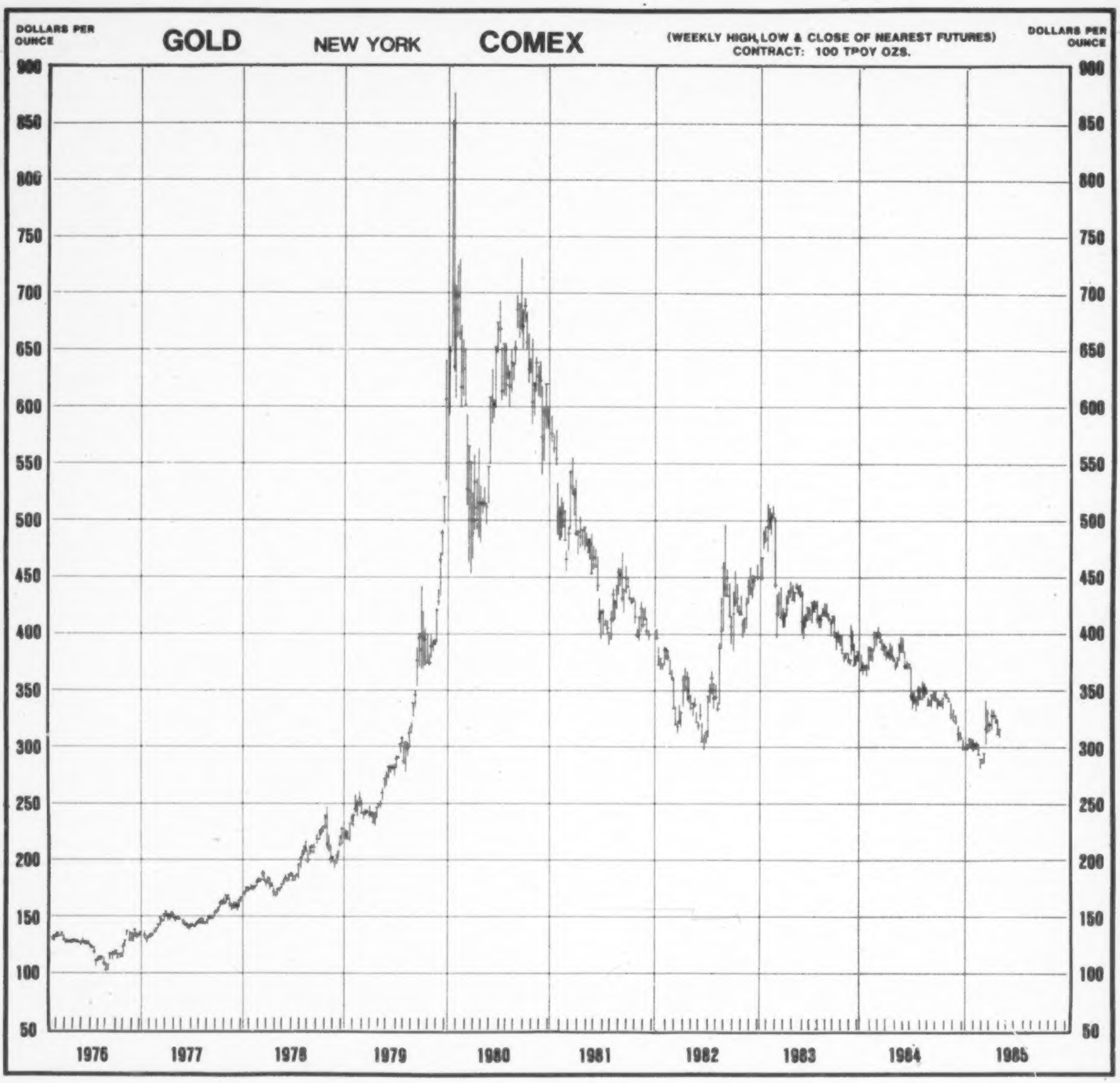


Monthly Average Gold Price (Unfabricated)—Engelhard Industries $ Per Troy Oz.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	125.3	131.7	133.1	128.4	127.4	126.2	118.0	110.1	114.7	116.6	131.4	134.4	124.77
1977	132.9	136.7	148.7	149.7	147.2	141.5	144.0	145.5	150.1	159.4	162.8	161.1	148.31
1978	173.7	178.6	184.1	175.8	176.5	184.1	189.3	206.3	212.4	227.7	206.2	208.1	193.55
1979	227.6	245.8	242.4	239.1	257.6	275.4	295.3	301.7	357.2	392.0	392.6	459.0	307.50
1980	675.4	665.3	553.6	516.8	514.0	600.7	643.3	627.5	675.8	661.2	622.4	594.9	612.56
1981	557.4	500.3	498.8	494.9	479.8	460.8	408.9	410.9	444.1	437.8	412.9	409.3	459.64
1982	384.1	374.1	330.0	350.0	334.0	315.0	340.1	366.0	435.6	422.2	414.2	444.7	375.91
1983	479.8	490.4	419.7	432.1	437.7	412.8	423.4	416.3	411.5	394.0	382.4	388.0	424.00
1984[2]	371.3	386.4	394.7	382.0	377.7	378.1	346.8	348.1	341.3	340.6	341.5	319.5	360.76
1985[1]	303.2	299.1											

[1] Estimate. [2] Preliminary. *Source: U.S. Bureau of Mines*

T.259

Grain Sorghum

U.S. sorghum stocks for the beginning of the 1984/85 crop year totaled 251 million bushels. These stocks, which represent a 37 percent decline from beginning stocks for the previous year, are a result of the drought-reduced crop in 1983. U.S. production in 1984/85 rose to 866 million bushels from 488 million a year earlier. Harvested acreage increased to 14.2 million acres from 9.8 million, and yields recovered to 57.3 bushels per acre from 48.7 in 1983/84.

Total domestic use was expected to increase in 1984/85, reaching 510 million bushels. Feed use was pegged by the USDA at 500 million bushels versus 381 million in 1983/84. Feed use has trended down since the early 1970s, however, as sorghum has been replaced by corn and, more recently, by wheat. Large supplies of wheat, a wheat support price more closely related to the market, and relatively strong sorghum prices kept wheat prices near feed value during the summer of 1984. Feed use of sorghum is likely to continue its downward trend, particularly if wheat support prices continue to decline.

Growth in demand for sorghum is likely to come from increased exports. Exports in 1984/85 were forecast at 275 million bushels compared to 246 million the previous year. Carrryover sorghum stocks for the 1984/85 season are expected to be 332 million bushels vs. 251 million a year earlier.

The USDA's prospective planting report in early February 1985 indicated sorghum acreage would be 17.9 million, up from 17.2 million a year earlier. Increases in acres came from the Delta and Southeast states. Acreage in Alabama was pegged 68 percent higher than in 1984; Arkansas, up 25 percent; Louisiana, up 31 percent; Mississippi, up 81 percent; and Missouri up 14 percent. Acreage in Illinois was expected to rise 41 percent from a year earlier. Escalating use of sorghum for crop rotation purposes, sorghum's more hardy constitution than soybeans', and firm sorghum prices are cited as reasons for increased acreage in these states.

U.S. Government Price Support

Provisions for the 1985 sorghum price support program, are again based on provisions for corn. Since the loan rate for corn was frozen at its 1984 level, the sorghum loan will remain at 2.42 dlrs per bushel and the target price will remain at 2.88 dlrs per bushel. According to the USDA, if corn stocks on September 30, 1985, are expected to exceed 1.1. billion bushels, the 1985 feed grain program will include a 5 to 20 percent total acreage cutback, of which not less than 5 percent will be a cash diversion. Any acreage cutback in excess of 15 percent must be equally divided between acreage reduction and cash diversion.

World Sorghum Supply and Demand In Millions of Metric Tons

	Exports		Imports					Utilization						Stocks[3]		
Crop Year	Argentina	Total Non-U.S.	U.S.	Total Exports	Japan	U.S.S.R.	Total Imports	Production	China	Japan	Mexico	Util-U.S.S.R.	Total Utilization	U.S.	Total U.S.	Stocks
1981–2	5.2	7.4	6.3	13.7	3.0	2.9	13.7	69.6	6.6	3.6	6.8	3.4	65.8	4.4	7.5	11.9
1982–3	4.9	6.2	5.4	11.6	2.7	2.3	11.6	64.9	6.9	2.8	6.1	2.9	63.2	3.4	10.2	13.6
1983–4[1]	4.8	6.9	6.2	13.2	4.2	1.9	13.2	57.8	7.5	3.7	6.3	2.0	60.8	4.2	6.4	10.6
1984–5[2]	4.5	6.2	7.0	13.1	4.7	2.5	13.1	65.9	7.3	4.6	6.4	2.5	64.7	3.4	8.4	11.8

[1] Preliminary. [2] Estimate. [3] End of Crop Year Season. *Source:* Foreign Agricultural Service, U.S.D.A. T.272a

Salient Statistics of Grain Sorghum in the United States

		For Grain					For Silage			For Forage	Sorghum		Feed Grains — U.S. Exports — Under Gov't. Programs	
Crop Year	Acreage Planted[2] for All Purposes — 1,000 Acres	Acreage Harv. — 1,000 Acres	Production 1,000 Bushels	Yield Per Harv. Acre Bushels	Price Cents Per Bushel	Produc. Value 1,000 Dollars	Acreage Harv. 1,000 Acres	Production 1,000 Tons	Yield Per Harv. Acre Tons	Acreage Harv. 1,000 Acres	Used on Farms where Produced — (In Mil. Bushels)	Sold — (In Mil. Bushels)	Mutual Security (AID) — (In Ths. Metric Tons)	Total — (In Ths. Metric Tons)
1980–1	15,644	12,513	579,343	46.3	294	1,696,008	734	7,003	9.6	1,412	195.5	392.5	224	1,129
1981–2	16,020	13,677	875,835	64.0	239	2,087,223	786	9,447	12.1	1,024			444	1,244
1982–3[1]	16,138	14,137	835,083	59.1	222	1,856,239	603	7,403	12.3	914			323	716
1983–4[1]	11,782	10,001	487,521	48.7	250	1,208,000	639	6,572	10.3	747				
1984–5[1]	14,816	15,348	865,856	56.4			609	6,472	10.6	680				
1985–6[1]														

[1] Preliminary. [2] Grain and sweet sorghums for all uses including sirup. *Source: Crop Reporting Board, U.S.D.A.* T.267

Production of All Sorghum for Grain in the United States, by States In Thousands of Bushels

Year	Iowa	Arizona	California	Colorado	Kansas	Missouri	Nebraska	New Mexico	No. Carolina	Oklahoma	South Dakota	Texas	Arkansas
1980	1,330	1,950	11,096	12,250	149,640	41,280	121,800	10,280	2,232	16,320	10,725	181,700	5,887
1981	1,600	2,158	8,880	12,775	238,520	75,200	164,800	12,240	4,134	22,050	19,565	273,420	16,986
1982	885	1,185	5,390	10,230	207,700	63,910	128,480	13,160	3,000	20,400	17,250	305,250	15,780
1983	300	988	3,645	6,960	121,690	40,020	61,000	6,300	1,386	11,880	13,630	157,500	17,600
1984[1]	660	1,360	3,936	15,910	216,750	91,770	121,600	15,400	2,640	18,000	18,565	209,350	42,480

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.268

U.S. Grain Sorghum Quarterly Supply and Disappearance In Millions of Bushels

Year & Period Beginning Oct. 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Begin. Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed & Resid.	Total	Exports	Total	Gov't. Owned[1]	Privately Owned[2]	Total Stocks
1981-2	108.5	875.8	[4]	984.3	4.3	4.8	2.0	427.7	438.8	249.1	687.9	42.9	253.5	296.4
Oct.-Dec.	108.5	87	[4]	984.3	1.3	1.3	—	215.9	218.5	77.8	296.3	38.4	649.6	688.0
Jan.-Mar.	688.0	—	[4]	688.0	1.3	1.3	.2	149.4	152.2	74.3	226.5	38.2	423.3	461.5
Apr.-May	461.5	—	[4]	461.5	2.5	.8	1.2	57.7	60.2	21.8	82.0	40.3	341.2	379.5
June-Sept.	379.5	—	[4]	379.5	1.2	1.4	.6	4.7	7.9	75.2	83.1	42.9	253.5	296.4
1982-3	296.4	835.1	[4]	1,132	4.2	3.9	1.8	507.1	517.0	214.3	731.3	175.6	224.6	400.2
Oct.-Dec.	296.4	835.1	[4]	1,132	1.4	1.0	—	251.6	254.0	67.0	321.0	46.7	763.8	810.5
Jan.-Mar.	810.5	—	—	810.5	1.2	1.0	.1	124.5	126.8	62.5	189.3	47.8	573.4	621.2
Apr.-May	621.2	—	—	621.2	.4	.6	.8	76.2	78.0	14.1	92.1	54.0	475.1	529.1
June-Sept.	529.1	—	—	529.1	1.2	1.3	.9	54.8	58.2	70.7	128.9	175.6	224.6	400.2
1983-4[3]	400.2	479.2	0.1	879.5	4.2	3.4	2.1	373.4	383.1	246.4	629.5	89.0	161.0	250.0
Oct.-Dec.	400.2	479.2	—	879.4	1.3	1.0	—	164.5	166.8	62.1	228.9	189.3	461.2	650.5
Jan.-Mar.	650.5	—	—	650.5	1.3	.7	.2	103.4	105.6	77.8	183.4	175.3	291.8	467.1
Apr.-May	467.1	—	—	467.1	.3	.4	.8	68.8	70.3	29.5	99.8	137.4	229.9	367.3
June-Sept.	367.3	—	0.1	367.4	1.3	1.3	1.1	36.7	40.4	77.0	117.4	89.0	161.0	250.0
1984-5[5]	250.0	813.5	—	1,064	10.0			450.5	460.5	250.0	710.5			353.0

[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary. [4] Less than 50,000 bushels. [5] Estimate. *Source: Commodity Economics Division, U.S.D.A.* T.269

Average Price of Sorghum Grain, No. 2, Yellow at Kansas City In Dollars Per 100 Pounds (Cwt.)

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1978-9	3.61	3.67	3.64	3.71	3.73	3.77	3.81	3.92	4.41	4.89	4.44	4.34	4.00
1979-0	4.42	4.41	4.57	4.21	4.35	4.20	4.15	4.31	4.49	5.36	5.71	5.61	4.65
1980-1	5.65	5.91	5.82	5.79	5.52	5.46	5.49	5.38	5.23	5.29	4.58	4.16	5.36
1981-2	4.14	4.14	4.27	4.44	4.26	4.28	4.45	4.48	4.50	4.38	4.02	4.06	4.29
1982-3	3.85	4.25	4.37	4.54	4.87	5.08	5.30	5.37	5.37	5.32	5.69	5.55	4.96
1983-4[1]	5.37	5.25	5.16	5.09	5.03	5.40	5.36	5.39	5.40	4.95	4.74	4.46	5.13
1984-5[1]	4.25	4.28	4.32	4.48	4.33								

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.271

U.S. Exports of Grain Sorghum, by Country of Destination In Thousands of Metric Tons

Yr. Beg. October	Poland	Belg. & Luxem.	Portugal	Spain	W. Germany	India	Venezuela	Israel	Japan	Senegal	Netherlands	Norway	Mexico	South Africa	Total All Exports
1977-8	383.7	87.1			.2	—		633.9	2,439.8	60.6	6.7		468.0	—	5,422.9
1978-9	136.4	—			.8	—		689.4	1,981.1	1.2	37.8	141.5	1,124.0	—	5,247.1
1979-0	107.5	.3			.3	—		348.0	3,972.7	12.5	69.1	232.8	2,255.2	—	8,199.2
1980-1	—	60.0			—	—	501	449.0	2,725.4	13.3	11.5	198.9	2,646.3	.3	7,701.6
1981-2[1]	—	.4		790	.4	—	713	368.0	2,436.9	1.9	.4	201.2	544.2	—	6,289.8
1982-3[1]				105			243	341	741				3,260		5,403
1983-4[1]				465			206	574	1,505				2,758		6,226

[1] Preliminary. *Source: Grain & Feed Division, U.S.D.A.* T.270

Grain Sorghum Price Support Program & Market Prices

Year Beginning October	Price Support Operations (Million Bushels)										No. 2 Yellow ($ Cwt.)			
	Placed Under Price Support													
	Loans	Purchase Agreements	Total	Redeemed by Farmers	Delivered to CCC	In Reserve Prog.	Loans Outstanding	Owned by CCC October 1	Support Loan — $ Per Cwt.	Target Price — $ Per Cwt.	Kansas City	Fort Worth	Los Angeles	Gulf Ports
1978-9	92			87	5	0	0	0	3.39	4.07	4.00	4.40	5.44	4.65
1979-0	64			64	0	0	0	0	3.57	4.18	4.65	4.97	6.32	5.54
1980-1	32			21	1	10	—	10	3.82	4.46	5.36	5.86	7.31	6.16
1981-2[2]	277			35	7	223	12	235	4.07	4.55	4.29	4.85	6.18	4.97
1982-3[2]	44			0	0	39	5	44	4.32	4.64	4.96	5.30		5.55
1983-4[2]									4.50	4.86	5.13	5.48		5.65
1984-5[2]									4.32	5.14	4.60			
1984-5[2]														

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.* T.272

Hay

Hay production in 1984/85 was forecast by the USDA at 154.1 million tons, up 8.7 percent from the drought-reduced production in 1983/84 of 140.7 million. Yields per acre in 1984 recovered to 2.47 from 2.36 the previous year.

Carryover stocks for the 1984/85 crop year beginning May 1 were estimated at 20.6 million tons, down from 1983/84 beginning stocks of 28.1 million tons. Total supplies for 1984/85 were estimated at 174.7 million tons, compared to 168.8 million in 1983/84.

Production of alfalfa accounted for 41 percent of all hay produced in 1984. Alfalfa output was 90 million tons in 1984, nearly 9 percent higher than production in 1983. Silage production from corn also rebounded in 1984, rising more than 7 percent from 1983.

A total of 89.4 million roughage-consuming animal units (RCAUs) were available in 1984/85, vs. 90.6 million in 1983/84. Thus, supply per RCAU was up a little more than 4 percent in 1984 from 1983.

The USDA's prospective planting report released in early February 1985 indicated hay producers intend to harvest 62.3 million acres in 1985 compared to 61.6 million harvested in 1984.

Salient Statistics of All Hay in the United States

Year Beginning May	Acres Harvested 1,000 Acres	Yield Per Acre Tons	Production	Carryover May 1	Disappearance	Farm Disposition		Supply	Disappearance	Animal Units Fed[2] Millions	Farm Price[3] $ Per Ton	Farm Produc. Value Million $	Retail Price Paid by Farmers April 15		
			Million Tons			Kept on Farms	Sold	Per Animal Unit In Tons					Alfalfa Seed (certified)	Timothy Seed	Red Clover Seed
													Dollars Per Cwt.		
1980–1	58,870	2.22	130.7	33.2	138.5	103.6	27.4	1.82	1.54	89.9	71.00	8,104	213.00	80.00	110.00
1981–2	59,599	2.39	142.5	25.4	142.9			1.83	1.56	91.8	67.10	9,218	218.00	98.20	117.00
1982–3	59,812	2.50	149.2	25.0	146.1			1.93	1.62	90.4	68.80	10,049	202.00	62.00	126.00
1983–4[1]	59,717	2.36	140.8	28.1	148.2			1.86	1.64	90.6	76.20	10,729	208.00	69.20	160.00
1984–5[1]	61,585	2.45	150.8	20.6				1.95		89.4	75.00	11,310			

[1] Preliminary. [2] Roughage-consuming animal units fed annually. [3] Price of hay sold baled, for year beginning July. *Source: Economic Research Service, U.S.D.A.* T.275

Production of All Hay in the United States by Important States In Millions of Tons

Year	Calif.	Idaho	Ill.	Iowa	Mich.	Minn.	Mo.	No. Dak.	Nebr.	N.Y.	Ohio	Pa.	So. Dak.	Wis.	Texas
1980	7.7	4.4	3.6	8.0	3.8	7.1	4.5	2.5	7.1	5.8	3.6	4.2	5.4	12.5	5.5
1981	7.9	4.5	3.5	8.2	3.9	8.2	6.8	4.8	7.0	5.3	3.5	4.5	5.8	11.1	7.0
1982	7.7	4.4	3.6	7.9	4.3	8.3	6.1	4.9	7.9	5.3	3.5	4.8	7.6	12.8	6.7
1983	7.4	4.9	2.7	5.9	4.5	8.3	5.4	4.5	7.6	5.3	3.2	4.6	7.6	12.2	7.5
1984[1]	7.9	4.7	3.9	7.9	5.3	8.4	6.3	4.5	7.5	5.4	3.8	5.1	8.1	12.8	5.4

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.277

U.S. Types of Hay Production & Farm Stocks In Millions of Short Tons

Year	Production					Farm Stocks	
	Alfalfa & Mixtures	All Other	All Hay	Corn for Silage[1]	Sorghum[1] Silage	Jan. 1	May 1
1980	79.9	51.1	130.7	112.0	7.0	107.7	33.2
1981	83.8	59.4	142.5	117.9	9.4	91.7	25.4
1982	88.4	60.9	149.2	117.8	7.4	99.2	25.0
1983	82.2	58.6	140.8	96.3	6.6	104.0	28.1
1984[2]	90.0	60.8	150.8	104.1	6.5	89.3	20.1
1985[2]						100.6	

[1] Not included in all tame hay. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.276

Average Price Received by Farmers for All Hay (Baled) on the 15th of Month In Dollars Per Ton

Crop Year	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Average[1]
1980–1	69.30	65.10	67.00	67.20	71.90	77.20	75.00	74.80	72.80	72.50	69.80	68.20	71.00
1981–2	75.30	66.90	64.00	63.90	62.70	64.80	65.40	65.70	67.90	69.90	69.50	73.30	67.10
1982–3	77.50	69.60	66.10	65.00	66.80	67.10	68.70	68.60	70.50	73.50	70.10	74.20	68.80
1983–4[2]	83.90	75.30	72.70	72.60	75.40	78.50	76.60	78.20	76.60	78.70	79.40	82.50	76.20
1984–5[2]	84.90	78.70	71.80	71.70	71.90	71.60	73.00	76.00	74.00	75.40	72.50		

[1] Weighted average by sales. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.278

Heating Oil

Heating oil is a light fuel oil that has been distilled off during the petroleum refining process. The yield of distillate fuel per barrel of petroleum averages 20 percent. Distillate fuel oil includes products known as No. 1 and No. 2 heating oils, diesel fuels, and No. 4 fuel oil. Distillate fuels are used in the generation of electricity and steam, for space heating, and on- and off-highway diesel engine fuel (including railroad engine fuel.) They are also used in the production of glass and ceramics. Compared with most other petroleum products, distillate fuel oil consumption is most highly correlated with weather data. It exhibits a pronounced annual peak in January or February. About half of the distillate fuel oil is used as diesel fuel in the transportation sector, a demand that has a subtle peak in the summer. This minor seasonal trend is largely offset by the use of distillate fuel oil for heating in the winter months, and is reflected by the strong correlation between heating degree-days and consumption of this fuel. Heating degree days are measured as the number of degrees per day that the daily average temperature is below 65° F. The daily average temperature is the mean of the maximum and minimum temperatures for a 24-hour period.

The average amount of distillate fuel oil supplied during 1984 was 2.86 million barrels per day, or a little over 6 percent above the average 1983 level. The amount of distillate fuel oil product supplied peaked at its highest level in two years by Janaury 1984. From there, the amount of distillate product supplied slumped sharply before finding a bottom in the April-May period of the year. This bottoming of the product supplied level may have been influenced by the anticipation of lower interest rates that occurred in late May and by the resulting pickup in industrial demand for distillate fuel oil. The average price of No. 2 distillate fuel oil sold to residential customers in the fourth quarter of 1984 was $1.05 per gallon. This was 1.3 percent above the price for heating oil at the end of the third quarter, but was 1.0 percent under the comparable year-earlier price. During that same period, the average price of No. 2 distillate fuel oil for resale was $0.81 per gallon, 3.2 percent below the resale price a year earlier. Once again, the amount of product supplied moved above the amount of total production in the first months of 1984.

Total production of distillate fuel oil in 1984 averaged 2.69 million barrels per day, just over 9 percent above the 1983 average and the highest average since 1979. Total product supplied averaged 2.86 million barrels per day during the year, 6 percent above the 1983 average. However, the slumping demand for heating oil throughout 1984 was reflected in an average buildup of stocks of 56,000 barrels per day, compared with a withdrawal of stocks averaging 124,000 barrels per day in 1983. Withdrawal of stocks was generally negative throughout 1984 except during the first four months of the year, including a brief period of surging demand and a sharp, short-lived runup in heating oil prices. Ending stocks of heating oil on a monthly basis during 1984 were at or below 1983 levels, however, and ending stocks dropped sharply during the April-May period.

The soaring dollar influenced a sharp increase in U.S. distillate fuel imports to a 1984 average of 274,000 barrels per day compared with an average 174,000 barrels per day the year before. At the same time, U.S. heating oil exports began to tail off vs. year-earlier levels due to reduced foreign demand.

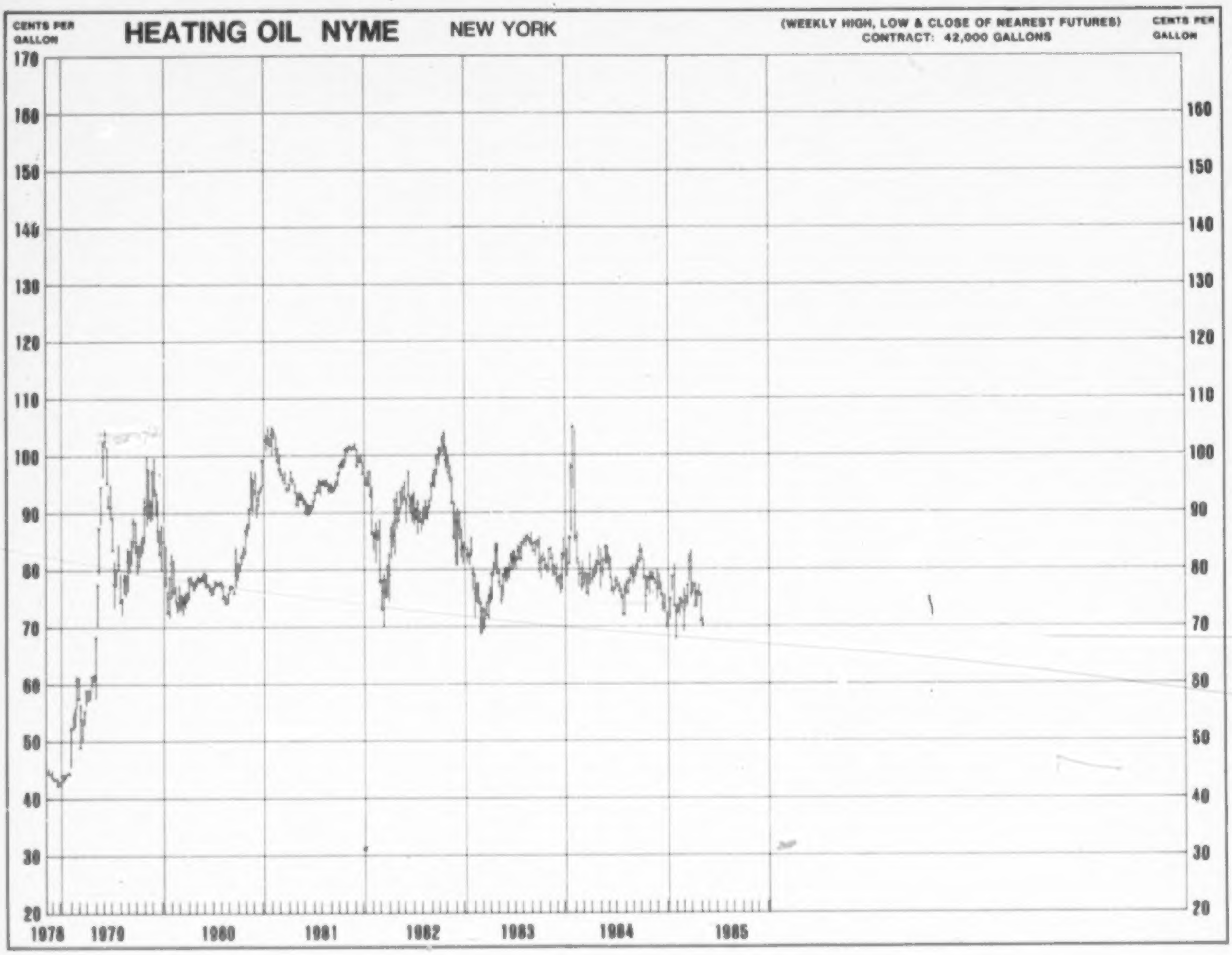
Futures Markets

Heating oil futures are actively traded on the New York Mercantile Exchange (NYMEX). Gasoil (heating oil) futures are traded on the International Petroleum Exchange (IPE) in London.

High, Low & Closing Prices of January Heating Oil Futures[1] in N.Y. In Cents per Gallon

Year of Delivery		Year Prior to Delivery[2]												Life of Delivery Range
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[2]	
1981	High	—	—	—	94.00	93.25	91.00	86.50	82.00	87.50	90.25	99.00	97.25	99.00
	Low	—	—	—	88.00	90.25	85.90	81.50	78.45	79.00	83.15	88.50	89.25	78.45
	Close	—	—	—	92.50	91.00	86.60	81.55	81.12	84.55	89.50	95.62	96.90	—
1982	High	—	114.00	113.10	110.70	103.40	101.10	103.75	103.05	99.35	102.35	102.85	101.75	114.00
	Low	—	113.75	109.50	101.00	100.10	97.00	99.35	98.10	96.70	99.00	101.50	96.95	96.70
	Close	—	114.50	109.50	102.00	100.95	99.90	102.35	98.19	98.89	102.06	101.78	97.10	—
1983	High	—	—	85.00	95.75	100.40	98.75	93.60	96.65	101.95	104.20	99.20	90.60	104.20
	Low	—	—	82.00	85.50	94.00	90.61	89.25	90.70	95.55	97.10	84.20	79.81	79.81
	Close	—	—	85.00	94.40	97.00	91.08	90.80	96.30	99.79	98.29	86.52	82.81	—
1984	High	—	—	75.25	84.25	83.75	87.00	88.90	90.15	87.55	84.15	84.10	85.55	90.15
	Low	—	—	68.70	78.50	79.25	81.80	85.25	86.30	82.00	80.20	77.10	75.80	68.70
	Close	—	—	74.60	82.49	81.80	86.20	88.90	86.52	82.50	82.16	77.44	84.24	—
1985	High	—	—	83.75	84.40	87.45	87.40	83.25	84.05	86.10	85.45	81.05	79.25	87.45
	Low	—	—	83.15	82.30	82.20	81.75	76.05	76.90	80.60	75.75	74.75	72.25	72.25
	Close	—	—	83.75	83.00	86.87	83.00	76.30	82.55	84.80	79.98	76.61	72.40	—
1986	High	—	—											
	Low	—	—											
	Close	—	—											

[1] No. 2 heating oil. [2] Contract expires the last business day of the previous calendar month quoted. *Source: N.Y. Mercantile Exchange* T.281



Month End Open Interest of Heating Oil[1] Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	FUTURES TRADING BEGAN NOV. 14, 1978										12	55
1979	327	200	118	299	370	485	1,165	1,280	1,894	1,952	2,221	1,973
1980	2,186	2,590	2,032	2,324	2,622	2,948	3,286	5,889	8,365	11,884	13,519	11,556
1981	11,792	12,040	13,256	14,893	17,919	16,822	19,220	28,102	36,996	35,519	33,517	31,585
1982	22,042	15,655	21,121	18,502	19,248	21,277	21,676	20,815	22,500	29,614	24,486	21,848
1983	19,642	23,307	18,980	22,868	27,797	29,320	34,414	32,276	37,856	36,164	36,230	30,916
1984	32,596	18,900	17,738	16,617	18,343	18,109	19,813	20,290	28,995	27,200	26,798	25,371
1985	19,122	16,552										

[1] No. 2 heating oil. *Source: N.Y. Mercantile Exchange*

T.279

HEATING OIL

Volume of Trading of Heating Oil Futures[1] in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	FUTURES TRADING BEGAN NOV. 14, 1978										37	79	116
1979	365	515	182	369	502	1,377	2,156	2,205	2,847	5,895	9,371	8,010	33,804
1980	8,512	8,427	5,146	4,798	3,421	5,923	6,074	11,564	27,430	40,525	53,098	63,366	238,284
1981	67,368	58,514	55,299	65,350	58,933	76,580	86,394	100,102	99,790	121,455	78,972	126,749	995,532
1982	165,079	148,794	176,373	146,821	98,440	135,181	107,102	118,496	120,830	167,439	177,832	183,139	1,745,526
1983	153,864	112,649	137,237	121,300	163,923	149,138	138,706	140,671	187,283	169,271	200,400	193,877	1,868,322
1984	254,788	209,802	144,326	144,041	161,689	144,182	120,668	153,913	137,011	281,183	182,005	163,938	2,091,546
1985	286,264	149,403											

[1] No. 2 heating oil. *Source: N.Y. Mercantile Exchange*

T.280

U.S. Gross Input to Crude Oil Distillation Units In Millions of 42-Gallon Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	373.2	326.5	368.7	371.6	400.4	398.8	414.1	409.1	380.0	398.3	386.0	404.9	4,632
1975	395.8	353.9	384.3	368.3	384.7	385.6	414.9	416.9	401.5	397.3	394.6	411.4	4,709
1976	403.6	388.1	412.2	396.4	413.4	427.7	446.1	446.3	425.3	428.0	437.3	457.0	5,081
1977	453.4	425.5	456.2	438.3	463.1	457.9	471.1	465.9	457.8	466.3	449.2	463.5	5,468
1978	450.1	401.4	448.3	426.6	472.4	451.5	470.5	483.8	462.2	475.9	470.6	487.6	5,501
1979	467.7	409.3	449.6	445.2	457.1	453.6	477.9	474.0	447.1	457.9	447.0	472.4	5,459
1980	453.6	421.7	433.8	413.5	423.4	421.7	422.5	412.3	408.2	402.9	403.4	432.4	5,049
1981	418.3	369.6	391.4	368.5	389.3	381.9	389.6	409.2	382.2	382.9	377.5	393.8	4,654
1982	371.5	325.1	361.4	353.1	379.1	388.1	399.6	378.0	376.7	376.8	364.4	368.8	4,443
1983[1]	354.1	308.1	344.7	349.9	373.9	378.2	390.5	382.0	373.7	371.1	366.8	354.1	4,361
1984[1]	365.8	356.0	374.7	361.8	384.8	371.8	379.1	389.9	376.0				

[1] Preliminary. *Source: Bureau of Mines*

T.282

Average Price of Distillate (Middle) No. 2 Fuel Oil[1] Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	113.9	124.1	129.1	130.1	133.8	137.4	141.8	143.3	145.6	147.7	157.3	171.7	139.7
1974	194.8	234.1	251.8	257.9	269.2	279.7	288.9	294.8	298.8	297.9	296.0	300.1	272.0
1975	299.1	297.5	294.6	294.9	296.1	301.3	308.3	312.9	318.2	322.9	330.8	336.3	309.4
1976	336.7	339.3	335.3	331.8	328.5	329.2	332.2	336.2	338.9	341.2	344.3	349.8	337.0
1977	359.2	369.6	378.0	384.4	387.5	387.5	388.6	389.1	389.3	389.6	392.4	394.4	384.1
1978	396.7	398.6	394.8	393.3	393.3	393.3	393.2	393.6	394.0	400.0	407.6	418.0	398.0
1979	425.7	432.6	451.9	477.9	504.8	542.3	593.1	632.8	680.6	709.9	715.3	719.9	573.9
1980	739.3	793.5	837.7	858.9	964.8	860.9	870.2	875.6	873.2	868.4	873.4	891.1	850.6
1981	935.4	1,000.3	1,082.8	1,105.4	1,092.5	1,092.2	1,079.8	1,076.7	1,067.8	1,053.4	1,047.5	1,060.6	1,058.1
1982	1,067.8	1,058.2	1,029.3	953.6	928.7	974.6	1,024.0	1,022.2	1,001.7	997.7	1,040.6	1,053.6	1,012.7
1983	985.3	927.4	874.2	813.4	838.1	879.4	876.3	883.0	894.3	912.2	901.8	892.1	889.8
1984	871.4	924.4	952.1	874.9	881.9	895.2	893.4	858.9	837.0	853.7	868.2		
1985													

[1] Barge lots, f.o.b. refinery or terminal, excluding all fees & taxes. *Source: Bureau of Labor Statistics* (0573)

T.283

Average Wholesale Price of Kerosene (Light Distillate)—No. 1 Fuel Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	112.1	120.4	121.2	123.4	122.9	126.9	128.6	129.4	130.0	135.6	135.9	145.9	128.0
1974	154.3	184.8	198.7	209.4	217.6	233.2	241.7	250.2	256.8	254.7	261.4	257.9	226.7
1975	253.7	267.2	274.9	273.6	280.6	284.6	283.7	299.1	297.9	299.4	304.2	307.8	285.6
1976	310.5	316.6	313.9	311.2	306.7	303.8	305.4	309.2	311.5	316.0	320.2	323.2	312.3
1977	326.1	339.7	346.9	352.4	355.5	358.0	360.9	363.2	364.0	375.1	379.4	381.3	358.5
1978	383.0	388.2	388.4	387.9	390.7	391.4	393.1	394.4	395.8	397.6	398.4	403.0	392.7
1979	407.5	412.7	419.1	433.0	465.5	504.1	533.4	588.4	633.4	675.2	696.6	706.3	539.6
1980	733.9	776.9	834.6	862.5	870.5	878.4	892.7	903.1	903.2	896.3	896.8	911.4	863.4
1981	932.1	972.0	1,041.0	1,080.9	1,084.1	1,078.9	1,067.5	1,052.6	1,044.6	1,043.2	1,042.7	1,037.9	1,039.8
1982	1,044.3	1,034.3	1,027.9	1,009.1	975.9	974.2	984.4	983.0	976.3	969.7	985.9	992.1	996.4
1983	975.2	959.4	939.2	908.4	897.1	894.3	882.8	880.7	880.4	889.3	885.5	881.4	906.1
1984	872.2	885.8	903.5	879.2	876.8	876.5	874.3	862.1	852.2	853.5	856.1		
1985													

Source: Bureau of Labor Statistics (0572)

T.284

Stocks of Distillate Fuel in the U.S., First of the Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Residual Fuel — Oil Stocks —	
													Jan. 1	July 1
1972	190.6	160.1	122.2	101.8	98.3	112.9	128.8	155.6	174.7	190.3	195.6	182.6	59.7	56.1
1973	154.3	131.0	113.3	111.3	114.7	119.1	137.9	160.9	177.3	190.2	203.0	200.2	55.2	51.8
1974	196.5	181.2	149.2	128.9	125.6	141.8	160.7	182.5	198.7	208.3	209.9	212.9	53.5	57.9
1975	200.1	199.8	176.7	161.1	146.3	152.1	163.3	181.5	197.4	220.8	226.2	235.8	59.7	69.7
1976	208.8	165.5	150.5	138.3	137.3	147.1	165.1	190.9	218.0	232.3	235.6	223.7	74.1	64.3
1977	186.0	143.0	133.3	141.9	148.3	162.2	178.9	204.9	229.8	252.8	267.4	270.6	72.3	71.9
1978	250.3	213.3	165.7	137.9	136.2	144.6	157.3	180.5	200.2	220.7	233.1	233.2	90.0	72.0
1979	216.5	175.8	127.3	112.8	115.1	123.1	141.4	171.2	195.4	220.4	231.1	236.7	90.2	79.8
1980	228.7	212.4	191.7	177.9	177.2	183.4	196.6	213.8	226.3	232.4	225.7	222.4	95.6	87.8
1981	205.4	179.4	172.6	164.4	164.6	171.8	179.9	186.3	200.2	207.3	201.2	200.1	91.5	69.4
1982	191.5	164.4	147.4	126.3	108.0	113.6	123.7	148.2	158.7	161.2	170.1	185.6	78.0	60.7
1983[1]	178.6	168.2	147.7	118.7	103.2	109.2	113.8	131.0	143.5	154.0	162.6	161.2	66.2	50.1
1984[1]	140.3	119.5	132.2	109.6	97.8	98.2	112.9	124.5	133.5	143.2			48.5	46.8

[1] Preliminary. *Source: Bureau of Mines*

T.285

U.S. Production of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	84.8	85.9	86.6	79.7	84.9	86.6	91.8	92.4	88.4	92.9	95.4	100.9	1,070.2
1977	104.5	103.5	98.4	89.8	97.1	95.7	99.1	101.4	99.3	104.2	100.2	103.0	1,196.3
1978	95.1	82.7	93.5	88.8	100.8	93.3	96.8	102.2	95.6	102.3	101.0	104.2	1,156.1
1979	94.3	80.9	93.6	88.4	95.0	94.6	102.5	103.0	100.6	100.8	97.2	99.9	1,150.8
1980	93.4	80.2	79.3	73.8	76.7	79.4	83.4	76.3	80.6	80.3	81.1	89.6	974.1
1981	92.6	78.6	77.0	72.5	76.1	75.0	74.2	82.3	78.3	77.0	81.5	88.6	953.8
1982	80.3	67.9	70.9	70.7	81.2	81.9	84.8	77.7	79.7	88.0	85.8	82.3	951.3
1983[1]	71.7	59.8	61.7	65.1	75.8	76.4	80.6	81.0	82.2	83.1	80.4	78.2	896.5
1984[1]	80.1	83.1	76.9	70.4	81.6	86.4	84.8	83.0	81.7				

[1] Preliminary. *Source: Dept. of Energy*

T.286

U.S. Imports of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	5.1	6.3	4.8	2.9	3.0	4.5	3.9	4.1	4.5	4.5	4.0	6.1	53.5
1977	10.8	18.6	17.0	4.6	3.1	4.0	5.9	5.0	5.1	4.6	5.6	7.0	91.3
1978	6.1	5.9	6.0	3.0	3.9	4.4	4.6	4.4	4.9	5.5	6.7	7.9	63.3
1979	7.0	5.5	5.5	4.5	5.8	5.4	7.0	6.7	3.8	6.6	5.8	7.1	70.5
1980	5.5	6.9	6.0	4.6	3.9	3.2	3.6	2.4	3.0	3.6	4.0	5.2	51.9
1981	8.5	9.1	4.6	3.5	5.5	6.7	5.5	5.4	3.9	3.7	3.7	2.9	63.1
1982	3.0	3.7	1.5	1.8	2.3	3.1	3.9	2.5	1.8	2.8	4.4	3.4	34.0
1983[1]	1.8	1.6	1.3	2.2	4.4	5.3	8.0	9.3	7.8	8.1	6.1	6.8	63.5
1984[1]	8.4	13.3	3.6	6.6	7.8	8.0	6.1	8.2	8.5				

[1] Preliminary. *Source: Dept. of Energy*

T.287

U.S. Domestic Consumption of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	133.2	107.2	103.5	83.6	78.1	73.1	69.9	69.4	78.6	94.0	111.4	144.7	1,146.7
1977	158.2	131.8	106.7	88.1	86.2	83.1	79.1	81.6	81.4	94.1	102.6	130.4	1,223.3
1978	138.2	135.8	127.3	93.3	96.2	85.1	78.2	86.8	79.9	95.4	107.5	128.8	1,252.6
1979	142.0	134.7	113.6	90.5	92.9	81.2	79.4	85.6	79.4	96.7	97.4	114.9	1,208.5
1980	115.1	107.6	98.5	79.0	74.5	69.5	69.7	66.2	77.6	90.5	88.5	112.1	1,049.0
1981	127.4	94.5	90.0	76.0	74.7	73.9	73.7	74.0	75.4	86.9	86.4	99.6	1,032.5
1982	108.0	86.4	91.3	89.3	75.8	73.5	63.8	68.8	75.2	80.0	74.2	88.5	974.9
1983[1]	85.6	79.3	89.9	81.4	72.6	75.8	69.7	76.5	77.3	80.9	86.2	104.3	981.9
1984[1]	108.2	82.4	100.9	87.9	87.6	78.1	78.1	79.8	79.9				

[1] Preliminary. *Source: Dept. of Energy*

T.288

Hides & Leather

The amount of leather shipped by U.S. tanners in 1984 declined about 8 percent to 17.0 million equivalent cattlehide units from 18.5 million units in 1983. Included in these totals were leathers produced from cattle, calf, kip, goat, sheep, lamb, cabretta, horse, and other animal and reptile hides and skins. Cattlehide leather accounted for 14.3 million units, or 84 percent of the total.

The footwear industry consumed about 62 percent of all leather produced domestically in 1984. The proportion of footwear made with leather uppers remained at about 56 percent although overall footwear—and upper leather—production declined substantially. Consumption of sole leather remained relatively unchanged from 1983. Cattlehide glove and garment leather deliveries declined about 7 percent during 1984, although sheep and lambskin grain and suede leather deliveries held up well.

The quantity of cattlehides derived from total commercial slaughter increased about 4.5 percent in 1984 to an estimated 38.3 million hides. Cattle slaughter declined to a low of 33.7 million head in 1979 from more than 43 million in 1976 and has increased only gradually since. High interest rates, high feed grain prices, and reduced demand for red meat discouraged a buildup of cattle herds.

According to the USDA, U.S. accumulated exports of cattle wet blue hides (excluding grain splits) in the 1984 marketing year (ended December 31, 1984) totaled 46.30 million pounds. Data for the previous marketing year was unavailable due to the short history of reporting shipments of wet blues. Accumulated exports of cattle hides excluding wet blues during the 1984 marketing year amounted to 22.24 million pieces compared with 20.31 million pieces during the previous marketing year. During 1984, the U.S. exported leather to nearly 61 countries. Leather exports to beneficiary developing countries—those countries that receive tariff concessions from the U.S.—rose to 57 percent of total U.S. exports in the first half of the year. At the same time, 30 percent of U.S. leather exports were shipped to South Korea, a leading exporter of footwear and leather garments to the U.S. During 1984, the strong dollar was an important factor in lowering foreign leather prices in U.S. markets.

Production of non-rubber footwear (including all footwear except rubber and rubber-soled fabric footwear) in 1984 declined about 15 percent to an estimated 291 million pairs. This decline of about 50 million pairs brought domestic production below 300 million pairs for the first time since the early 1930s. Production cuts were especially heavy in women's footwear and in athletic footwear.

Leather shipments were expected to remain unchanged in 1985 at about 17.0 million equivalent cattlehide units. Declining shoe production may affect the industry's volume, but this could be offset by export growth as the year progresses. Exports could increase despite the strong U.S. dollar because of increased leather requirements in countries expanding their production of shoes for export to the U.S.

World Production of Bovine Hides and Skins In Thousands of Units of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Colombia	France	Germany East	Germany West	Mexico	Italy	Poland	South Africa	Turkey	New Zealand	Un. Kingdom	United States	USSR
1976	320.1	208.0	339.0	117.6	76.5	174.0	48.2	167.1	108.0	93.6	86.1	55.3	50.1		111.6	1,223	725.6
1977	339.2	219.5	375.0	115.3	73.0	162.2	49.1	161.1	114.6	95.5	80.4	58.8	52.1		102.9	1,209	735.0
1978	370.8	202.1	336.0	106.1	78.2	162.8	49.7	164.5	124.0	91.9	75.9	65.1	53.4		99.0	1,134	741.0
1979	358	158	281	89		EC-10 (682)						64		44		964	867
1980	322	149	280	91		EC-10 (698)						60		40		964	867
1981	333	142	291	96		EC-10 (683)						52		44		987	890
1982[1]	293	155	308	98		EC-10 (683)						53		46		1,019	867
1983[1]	270	159	322	99		EC-10 (714)						61		44		1,040	892
1984[1]	291	124	295	92		EC-10 (743)						60		38		1,067	892

* Average [1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

T.289

Salient Statistics of Hides & Leather in the United States

Year	New Supply of Cattle Hides: Domestic Slaughter: Federally Inspected	Uninspected[4]	Total Production	Net Exports	Total New Supply	Wholesale Prices—F.O.B. Pts.: Calf[2] Skins ¢ Lb.	Hides[3] Heavy Native Chicago	Production: All U.S. Tanning	Cattle-Hide	Upper & Lining Leather Exports Ths. Sq. Ft.	Wholesale Leather Prices: Sole[5]	Upper[6]	Footwear: Production[7]	Export
	Thousands of Equivalent Hides							In Ths. Equiv. Hides			1967 = 100		Mil. Pairs	
1976	38,992	4,590	43,582	24,318	19,264	75.5	33.0	23,526	20,231	203,707	197.9	163.8	423	6.0
1977	38,717	3,139	41,856	23,569	18,287	91.4	36.2	21,528	18,512	206,276	206.1	171.8	418.1	5.4
1978	36,948	2,604	39,552	24,101	15,451	134.6	47.2	20,199	17,371	208,799	235.2	185.3	418.9	6.2
1979	31,504	2,173	33,678	23,063	10,615	168.7	72.5	18,170	15,041	187,665	329.6	192.9	398.9	7.6
1980	31,642	2,165	33,807	18,640	15,167	109.8	44.5	17,600	14,790	192,597	283.8	211.7	386.3	9.8
1981	32,819	2,134	34,953	18,701	16,252	N.A.	43.8	19,184	15,520	192,193	306.7	214.4	372.0	9.7
1982	33,907	1,936	35,843	22,553	13,290	N.A.	42.3	18,229	15,028	159,804	N.A.	215.8	359.1	7.7
1983[1]	34,830	1,832	36,662	21,205	15,457		49.9	18,610	15,423	155,808		223.4	344.3	6.2
1984[1]	35,880	1,702	37,582	25,194	12,388		60.9			163,373		218.0	300.0	6.2

[1] Preliminary. [2] Packer, heavy, 9½ to 15 pounds. [3] Cents per pound. [4] Includes farm slaughter; diseased & condemned animals & hides taken off fallen animals. [5] Bends, light, f.o.b. tannery. [6] Women's Leather Upper. [7] Other than rubber. *Sources: Leather Industries of America; Bureau of Labor Statistics; Dept. of Commerce*

T.290

U.S. Exports of Upper & Lining Leather In Thousands of Square Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	14,517	17,367	18,157	19,449	21,149	18,795	14,028	12,074	18,343	14,361	15,108	18,388	203,707
1977	18,630	19,272	23,315	18,338	16,714	16,205	18,612	12,276	16,838	12,807	14,980	18,240	206,276
1978	17,364	15,308	16,408	16,720	18,899	21,427	14,160	19,726	16,224	17,438	17,947	17,176	208,799
1979	13,854	16,014	18,833	16,480	15,664	18,526	13,153	15,265	14,457	13,895	16,089	15,433	187,665
1980	15,769	16,873	18,710	13,024	12,652	15,483	15,481	15,215	15,818	19,051	20,880	13,641	192,597
1981	19,633	14,418	19,717	17,678	18,016	18,692	13,921	10,918	15,393	12,682	19,464	11,660	192,193
1982	10,849	10,343	13,696	15,534	17,449	18,610	18,486	12,065	10,417	11,842	9,726	10,786	159,804
1983[1]	11,052	12,453	15,078	15,200	13,492	14,868	12,013	13,099	12,715	14,027	12,400	9,412	155,808
1984[1]	13,624	13,015	17,787	14,772	19,514	14,294	12,907	14,046	11,219	11,533	10,231	10,431	163,373

[1] Preliminary. *Source: Leather Industries of America*

T.292

U.S. Production of All Footwear (Shoes, Sandals, Slippers, Athletic, Etc.) In Millions of Pairs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	37.0	36.1	42.2	39.4	38.7	37.3	29.5	34.8	35.1	33.2	30.0	29.2	422.5
1977	34.8	34.5	37.6	34.3	35.5	36.9	26.9	37.5	35.6	36.4	35.9	33.2	418.1
1978	34.5	34.8	39.9	35.8	39.5	36.8	26.1	37.1	34.2	36.3	33.8	30.2	418.9
1979	37.3	34.9	38.7	33.4	37.3	31.9	25.4	33.9	31.1	35.0	31.3	28.7	398.9
1980	34.9	33.2	33.9	32.9	34.1	32.5	27.3	30.7	32.5	36.2	29.5	28.6	386.3
1981	31.8	31.0	34.8	33.3	32.3	30.6	27.4	31.1	33.4	35.6	31.1	28.0	372.0
1982	27.0	27.8	31.7	27.7	28.6	28.6	24.0	28.3	28.9	28.9	27.1	24.4	342.4
1983[1]	27.8	31.8	31.5	27.0	30.0	28.5	22.5	30.4	29.8	29.1	27.7	25.2	344.3
1984[1]	26.7	28.5	29.6	27.1	28.0	24.1	20.3	25.4	21.4	24.7	21.9		

[1] Preliminary. *Source: U.S. Department of Commerce*

T.295

U.S. Imports and Exports of All Cattle Hides In Thousands of Hides

	Imports		U.S. Exports—By Country of Destination													
Year	Total	From Canada	Total	Canada	France	W. Germany	Japan	Mexico	Netherlands	Poland	Taiwan	Spain	Romania	Korea Repub.	Czech.	Italy
1976	962	958	25,270	1,057	816	518	9,356	1,708	326	389		957	1,651	3,270	678	1,561
1977	932	926	24,489	859	769	435	8,425	1,967	417	433		940	1,472	3,611	680	1,048
1978	704	694	24,791	1,093	555	379	8,797	1,938	211	349		1,019	1,942	3,720	586	1,284
1979	673	643	23,731	1,248	691	454	7,396	2,428	324	513		892	1,317	2,526	682	2,248
1980	880	859	19,512	1,046	238	206	7,476	1,972	164	522		112	1,046	2,653	318	690
1981	1,028	881	19,703	1,212	137	319	7,512	2,485	94	203		394	680	3,579	334	486
1982	658	592	23,175	1,041	478	671	6,469	1,882	280	790		643	939	4,572	415	1,395
1983	665	570	21,281	1,235	332	343	6,413	1,296	174	303		246	1,318	4,635	489	823
1984[1]	711	669	25,029	1,072	292	252	7,334	1,858	221	319	2,697		1,032	5,423	669	1,170

[1] Preliminary. *Source: Leather Industries of America*

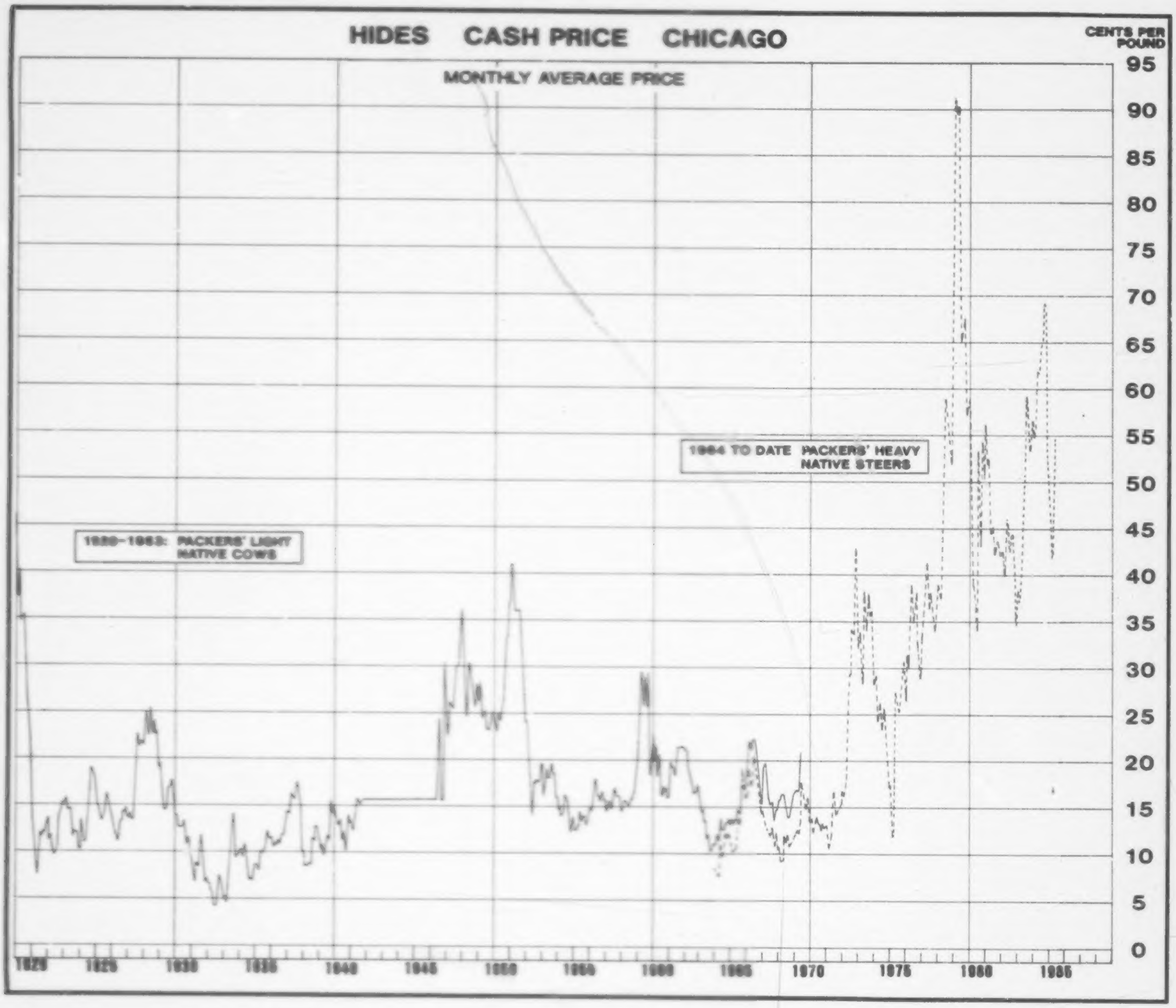
T.297

Average Factory Price of Footwear in the United States In Dollars Per Pair

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	8.00	7.87	8.07	8.16	8.23	8.23	8.32	8.34	8.63	8.21	8.75	8.73	8.28
1977	8.61	8.40	8.63	8.81	8.53	8.39	8.44	8.36	8.51	8.28	8.62	9.00	8.54
1978	8.50	8.39	8.76	9.35	9.51	9.37	9.41	8.66	9.40	9.37	9.61	10.31	9.20
1979	9.73	9.84	9.68	10.23	10.00	10.48	11.74	10.31	10.30	10.46	11.15	11.47	10.60
1980	11.67	11.83	11.81	12.27	12.16	11.37	11.40	11.94	11.08	11.25	11.45	11.41	11.63
1981	11.67	11.93	12.52	12.72	13.09	13.16	13.01	13.14	13.22	12.90	12.67	12.58	12.52
1982	12.96	12.32	12.49	12.74	12.76	13.30	14.13	13.34	13.12	13.10	12.56	14.08	13.14
1983	12.88	13.72	13.18	13.54	14.20	13.57	12.91	14.14	14.06	15.02	14.69	15.55	13.96
1984[1]	13.31	12.63	12.46	13.34	13.53	12.84	13.24	12.99	13.45	12.96	13.35	13.90	13.17
1985	13.13												

[1] Preliminary. *Source: Leather Industries of America*

T.298



Index Price[2] of Hides (Packer Heavy Native Steers[1])—F.O.B. Shipping Point 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	10.4	11.5	11.5	15.8	16.8	14.1	14.8	14.8	15.5	15.3	16.8	16.3	14.5
1972	17.8	19.0	23.3	25.5	28.0	29.3	29.3	34.0	33.5	40.5	43.0	32.0	29.6
1973	34.0	33.5	28.3	38.3	36.3	33.8	36.3	38.3	35.5	36.3	32.8	28.2	34.3
1974	29.3	—	24.1	26.3	26.3	23.3	25.8	25.3	24.5	17.3	17.5	14.3	23.1
1975	11.8	12.5	16.3	27.5	25.3	25.8	25.3	25.3	25.8	28.0	30.8	26.3	23.4
1976	31.5	29.8	30.0	34.9	39.0	34.8	36.3	37.3	38.3	31.8	29.0	32.3	33.8
1977	35.8	36.3	37.3	40.1	41.3	36.3	38.1	36.8	34.8	33.8	34.8	38.0	37.0
1978	38.8	37.8	37.3	41.3	41.8	45.8	47.8	53.0	59.0	57.3	54.8	51.8	47.2
1979[2]	506.4	548.4	766.9	750.1	760.2	696.3	653.0	594.6	549.2	568.9	498.5	480.1	614.4
1980	496.7	409.3	331.5	320.5	283.6	321.0	369.0	448.0	361.4	412.9	455.9	420.6	385.9
1981	375.1	344.1	356.1	405.8	385.8	364.9	351.7	373.6	344.3	347.7	347.2	343.4	361.6
1982	353.6	346.0	325.8	339.3	353.5	342.1	342.1	349.7	343.5	336.4	324.7	312.9	339.1
1983	313.9	315.0	329.6	345.0	378.6	386.8	434.2	N.A.	447.5	450.2	469.9	489.6	396.4
1984	479.0	469.5	486.4	470.4	530.6	558.9	515.9	543.3	597.5	569.4	N.A.	391.5	510.2
1985													

[1] Over 53 pounds. [2] Data prior to 1979 are in cents per pound. *Source: Bureau of Labor Statistics* (0411–0111.99) T.296

Hogs

Inventory of all hogs in the 10 major U.S. producing states on December 1, 1984, totaled 54.0 million head, 5 percent lower than the inventory in December of 1983. The hogs kept for breeding showed a 6 percent decline in the breeding herd from 1983's level of 7.4 million head. The market hog inventory totaled 47.1 million head, 4 percent lower than the previous year.

The U.S. pig crop in 1984 totaled 86.5 million head, a decrease of 7 percent from 1983. The June–November 1984 pig crop was estimated at 44.2 million, 3 percent below a year ago. In this period, a total of 5.86 million sows farrowed, 5 percent fewer than the previous year, and the litter size averaged 7.54, up from 7.41 a year earlier. Industry sources said the nearly $1.00 a bushel decline in corn prices from 1983 was not enough to make herd expansion profitable for hog producers.

On December 1, 1984, producers indicated intentions to have 5 percent fewer sows farrow during the December 1984–May 1985 period than the previous year, according to the USDA's hogs and pigs report. In the March 1985 report, producers indicated intentions to farrow 5 percent fewer sows than the previous year in the March–May period. The same report also showed December 1984–February 1985 farrowings were 1 percent less than a year ago. In March, farrowing intentions for the December 1984–May 1985 period were reported at 3 percent below the previous year.

The USDA estimated total inventory of all hogs and pigs as of March 1, 1985, at 39.5 million head, down 1 percent from 1984's inventory. This estimate represents the lowest March inventory since 1976. The March 1985 breeding inventory was estimated at 5.2 million head, 4 percent below 1984's 5.45 million.

Imports of hogs and pork products from Canada and the EEC proved to be major supply factors in 1984, and the resolution of these imports became a focus of the hog industry in early 1985. Live hog imports to the U.S. from Canada increased 195 percent in 1984, to 1.3 million head from 447,465 in 1983, according to the USDA Foreign Agriculture Service. EEC pork exports to the U.S. increased about 44 percent in 1984, rising to 129,682 metric tonnes from 72,541 in 1983. These imports were encouraged by the strong U.S. dollar in 1984. The Commerce Department in early 1985 was investigating a countervailing duty to impose on these imports. If countervailing duties are imposed, industry analysts expect hog and pork product imports to subside somewhat, although the extent of the decline is likely to depend on the strength of the dollar in 1985.

Futures Markets

A 30,000 pound live hog futures contract is traded at the Chicago Mercantile Exchange, and a 15,000 pound contract is traded at the MidAmerica Commodity Exchange in Chicago.

World Hog Numbers in Specified Countries In Millions of Head

Year	Brazil	Canada	Denmark	France	W. Germany	Hungary	Italy	Japan	Mexico	Philippines	Poland	Spain	China[3]	Un. Kingdom	United States	USSR	World
1976	36.0		7.6	11.5	19.8	7.0	8.9	7.5	12.0	6.5	21.6		1976–	7.7	49.3	57.9	1976–
1977	36.8		7.9	11.5	20.6	7.9	9.1	8.1	12.3	5.7	16.8		80	8.2	54.9	63.1	80
1978	37.6		8.2	11.5	21.4	7.9	9.4	8.8	12.6	6.9	20.6		Avg.	7.7	56.5	70.5	Avg.
1979	36.0		9.2	11.3	22.6	8.0	8.9	9.5	12.7	7.4	21.1		(296.2)	8.0	60.4	73.5	(670.9)
1980	36.5	10.1	9.5	11.4	22.4	8.4	8.8	10.0	12.8	7.9	21.0	10.5		7.8	67.3	73.9	
1981	35.0	10.2	9.7	11.7	22.6	8.3	8.9	10.1	15.4	7.6	18.7	11.0	305.4	7.8	64.5	73.4	708.7
1982	33.5	10.0	9.8	11.8	22.3	8.3	9.0	10.0	16.2	7.6	19.1	10.7	293.7	7.9	58.7	73.3	692.4
1983	33.5	10.1	9.5	11.7	22.5	9.0	9.1	10.3	16.5	8.0	17.6	11.7	300.8	8.2	54.5	76.7	700.3
1984[1]	33.0	10.4	9.0	11.2	23.4	9.8	9.2	10.4	15.8	7.8	15.8	12.1	298.5	7.8	56.7	78.5	705.9
1985[2]	33.0	10.4	9.1	10.1	22.1	9.8	9.1	10.5	15.0	7.5	16.6	12.1	296.8	7.8	54.0	79.5	700.2

[1] Preliminary. [2] Estimate. [3] Mainland. *Source: Foreign Agricultural Service, U.S.D.A.* T.300

Salient Statistics of Pigs and Hogs in the U.S.

Year	Pig Crop					Value of Hogs on Farms, Dec. 1		Hog Marketings Ths. Head	Quantity Produced (Live Wt.) Mil. Lbs.	Value of Production Mil. $	Hogs Slaughtered in Thousand Head				
	Spring[2]		Fall[3]		Total Pig Crop	$ Per Head	Total Million $				Commercial			Farm	Total
	Sows Farrowed	Pigs Saved	Sows Farrowed	Pigs Saved							Federally Inspected	Other	Total		
	In Thousands of Head														
1976	5,777	42,177	5,850	42,218	84,395	47.00	2,583	75,747	18,160	7,856	70,454	3,330	73,784	1,175	74,959
1977	6,050	42,960	6,009	43,202	86,162	63.20	3,575	80,939	19,021	7,485	74,019	3,285	77,303	1,139	78,442
1978	6,034	42,481	6,398	46,031	88,512	83.20	5,023	81,271	19,466	9,066	74,139	3,176	77,315	1,102	78,417
1979	7,176	50,571	7,322	52,241	102,792	56.00	3,775	92,327	22,595	9,416	85,425	3,674	89,099	1,080	90,179
1980	7,229	52,288	6,855	49,432	101,720	74.70	4,821	100,388	23,352	8,847	91,882	4,192	96,074	1,100	97,174
1981	6,440	47,605	6,268	46,248	93,853	70.10	4,114	95,895	21,783	9,521	87,850	3,697	91,547	897	92,444
1982	5,664	41,575	5,884	43,614	85,189	89.90	4,903	86,653	19,441	10,180	79,328	1,867	82,191	654	81,850
1983	6,301	47,409	6,176	45,746	93,155	58.80	3,331				84,392		87,584		
1984[1]	5,686	42,322	5,856	44,154	86,476	75.00	4,054						85,156		
1985[4]	5,393	40,124													

[1] Preliminary. [2] December–May. [3] June–November. [4] Breeding intentions. *Source: Statistical Reporting Service, U.S.D.A.* T.302

HOGS

Hogs and Pigs on U.S. Farms on December 1 In Thousands of Head

Year	Georgia	Illinois	Indiana	Iowa	Kansas	Kentucky	Minnesota	Missouri	Nebraska	No. Carolina	Ohio	South Dakota	Tennessee	Wisconsin	Total
1979	2,360	6,950	4,850	16,200	2,090	1,470	4,900	4,650	4,150	2,650	2,120	2,000	1,400	1,830	67,318
1980	3,250	6,600	4,600	16,100	1,900	1,220	5,100	3,980	3,900	2,460	2,150	1,860	1,140	1,680	64,462
1981	1,520	6,450	4,100	16,300	1,770	1,040	4,300	3,400	4,100	1,980	2,050	1,710	900	1,380	58,698
1982	1,450	5,600	4,400	14,400	1,670	960	4,000	3,500	3,800	2,150	1,920	1,580	750	1,220	54,534
1983	1,350	5,400	4,200	15,000	1,650	1,000	4,400	3,600	4,000	2,350	2,200	1,730	950	1,280	56,694
1984[1]	1,200	5,400	4,300	14,200	1,600	880	4,300	3,450	3,700	2,300	1,970	1,600	1,100	1,300	54,043

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.301

Quarterly 10—U.S. State Hogs & Pigs Report In Thousands of Head

Year[2]	Inventory[1]	Breeding[1]	Market[1]	Farrowings	Pig Crop	Year	Inventory[1]	Breeding[1]	Market[1]	Farrowings	Pig Crop
1982	42,890	5,708	37,182	9,062	66,797	1984[3]	42,420	5,348	37,072	9,020	67,680
I	45,970	6,021	39,949	1,977	14,059	I	44,150	5,638	38,512	1,964	14,288
II	40,610	5,578	35,032	2,391	17,943	II	40,070	5,446	34,624	2,481	18,814
III	41,190	5,689	35,501	2,199	16,254	III	41,915	5,771	36,144	2,259	17,158
IV	41,672	5,553	36,117	2,363	17,548	IV	43,180	5,550	37,630	2,316	17,420
1983	44,150	5,638	38,512	9,735	72,733	1985					
I	42,440	5,670	36,770	2,090	15,543	I[3]	42,420	5,348	37,072	1,940	
II	41,840	5,928	35,912	2,768	21,063	II					
III	45,645	6,263	39,382	2,422	17,836	III					
IV	46,030	5,839	40,191	2,377	17,663	IV					

[1] Beginning of period. [2] Quarters are Dec. preceding year—Feb. (I), Mar.–May (II), June–Aug. (III), & Sept.–Nov. (IV). [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.181a

U.S. Federally Inspected Hog Slaughter In Thousands of Head

Week ended	1983	1984	1985	Week ended	1983	1984	1985
Jan. 1[1]	1,204	1,350	1,238	July 2	1,592	1,438	
8	1,487	1,418	1,295	9	1,370	1,105	
15	1,564	1,708	1,679	16	1,581	1,445	
22	1,561	1,625	1,615	23	1,515	1,378	
29	1,531	1,577	1,528	30	1,558	1,305	
Feb. 5	1,353	1,543	1,565	Aug. 6	1,497	1,382	
12	1,467	1,571		13	1,566	1,406	
19	1,492	1,578		20	1,554	1,409	
26	1,449	1,579		27	1,526	1,479	
Mar. 5	1,544	1,656		Sept. 3	1,613	1,502	
12	1,646	1,791		10	1,435	1,396	
19	1,584	1,691		17	1,772	1,657	
26	1,550	1,681		24	1,716	1,679	
Apr. 2	1,573	1,695		Oct. 1	1,732	1,679	
9	1,620	1,695		8	1,841	1,699	
16	1,759	1,728		15	1,844	1,701	
23	1,724	1,642		22	1,895	1,754	
30	1,714	1,588		29	1,844	1,736	
May 7	1,680	1,635		Nov. 5	1,927	1,754	
14	1,663	1,664		12	1,955	1,742	
21	1,637	1,579		19	1,981	1,681	
28	1,580	1,578		26	1,593	1,446	
June 4	1,409	1,367		Dec. 3	1,994	1,812	
11	1,641	1,591		10	1,941	1,792	
18	1,550	1,541		17	1,804	1,692	
25	1,532	1,431		24	1,465	1,687	

[1] Corresponding dates—1983: January 1, 1983; 1984: December 31, 1983; 1985: December 29, 1984. *Source: Economic Research Service, U.S.D.A.*

T.181b

Federally Inspected Hog Slaughter in the United States In Thousands of Head

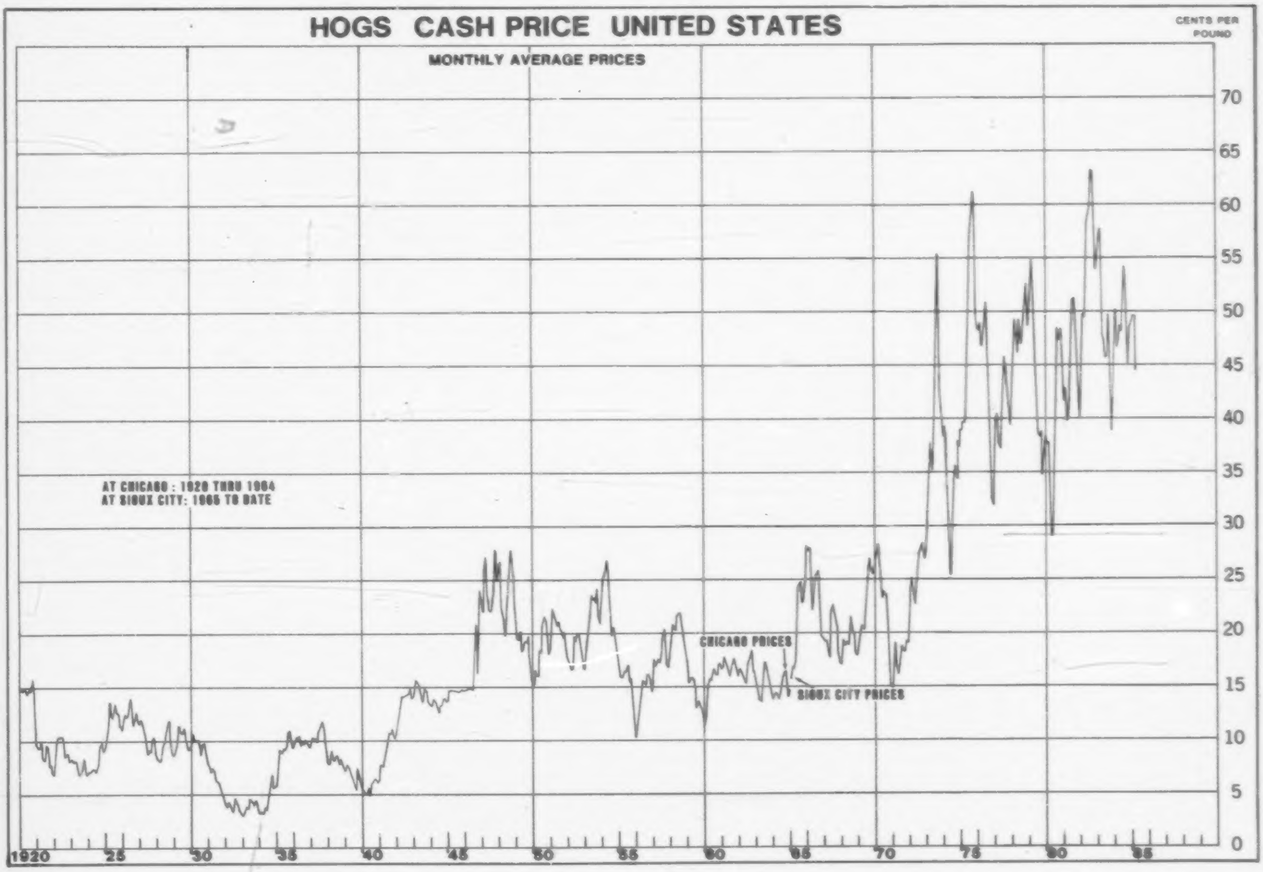
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1977	5,840	5,825	7,238	6,395	5,877	5,695	4,908	6,148	6,514	6,507	6,885	6,186	74,019
1978	5,969	5,840	6,795	6,213	6,298	5,778	5,402	6,227	6,203	6,576	6,737	6,101	74,139
1979	6,393	5,693	7,113	6,962	7,284	6,678	6,734	7,662	6,840	8,736	8,097	7,234	85,425
1980	8,038	7,277	7,856	8,456	8,167	7,279	6,910	6,745	7,601	8,404	7,362	7,788	91,882
1981	7,768	6,873	7,988	7,993	7,004	6,682	6,540	6,580	7,320	7,872	7,308	7,923	87,850
1982	6,875	6,340	7,691	20,043			18,310			20,068			79,328
1983[1]	6,421	5,762	7,339	7,010	6,816	6,928	6,270	7,082	7,268	7,829	8,152	7,515	84,762
1984[1]	6,947	6,591	7,578	6,953	7,153	6,392	5,800	6,627	6,439	7,908	7,354	6,729	82,471
1985[1]	7,114												

[1] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.* T.305

Average Live Weight of All Hogs Slaughtered Under Federal Inspection In Pounds Per Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1977	234	233	234	236	239	241	239	237	236	239	243	239	237.4
1978	236	233	234	237	241	244	241	239	239	243	248	247	240.2
1979	241	237	238	240	243	246	246	240	240	242	245	246	242.0
1980	243	239	239	241	244	244	242	239	239	241	246	247	242.0
1981	246	242	241	242	244	245	242	239	240	243	246	247	243.0
1982[2]	243	239	239	243			242			247			243.0
1983[2]	244	241	241	243	246	247	245	242	240	243	246	244	243.5
1984[2]	242	241	240	243	246	247	245	243	242	244	246	246	243.8
1985[2]	245												

[1] Average is weighted by Federally inspected slaughter. [2] Preliminary. *Source: Department of Agriculture* T.311



HOGS

Average Price Received by Farmers for Hogs in the U.S. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct	Nov.	Dec.	Average[1]
1980	36.20	36.70	33.40	28.00	28.60	33.10	41.20	46.20	46.10	47.20	45.60	43.80	38.00
1981	40.90	41.30	38.80	39.00	40.90	47.40	49.30	49.20	48.60	45.00	41.50	39.00	43.90
1982	43.40	48.30	48.60	51.20	56.70	57.50	57.80	61.20	61.30	55.80	52.50	53.60	52.30
1983	55.30	56.10	50.40	46.90	45.90	43.90	43.40	46.70	44.10	40.40	37.50	44.20	46.80
1984[2]	48.40	45.40	45.80	47.50	47.20	49.00	52.00	50.50	46.30	43.60	47.00	48.60	47.10
1985[2]	48.00	48.30	43.60										

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.306

Average Wholesale Price of Hogs, Average (All Weights) at Sioux City In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	37.58	37.61	33.97	29.08	29.35	34.97	41.78	48.49	47.42	48.36	46.44	45.07	39.48
1981	41.67	42.78	39.88	40.15	41.96	48.78	51.01	51.14	48.89	46.15	42.10	40.17	44.29
1982	45.77	49.70	49.50	52.16	58.35	59.01	59.70	63.18	63.12	57.27	53.90	55.23	55.21
1983	57.24	57.78	51.37	47.84	47.40	45.73	45.81	49.77	46.05	41.64	38.81	46.53	47.73
1984	50.14	46.68	47.36	48.69	48.22	50.04	54.25	52.57	47.86	45.01	48.55	49.03	49.03
1985	49.60												

Source: Department of Agriculture T.307

Hog-Corn Price Ratio[1] at Omaha

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	16.5	16.1	15.2	12.3	12.0	13.8	15.3	16.1	15.6	15.2	13.8	13.5	14.6
1981	13.0	13.3	12.4	12.3	12.9	15.2	15.9	18.1	19.8	18.7	17.5	16.8	15.5
1982[2]	18.4	20.1	19.8	19.8	21.8	22.1	23.3	27.9	28.1	27.2	22.8	23.0	22.9
1983[2]	23.2	21.7	18.6	15.4	15.2	14.7	14.4	14.6	13.8	12.9	11.9	14.5	15.9
1984[2]	16.0	15.3	14.5	14.5	14.3	14.8	16.6	16.8	16.0	16.4	18.4	19.6	16.1
1985[2]	18.8												

[1] Ratio computed by dividing average price packer and shipper purchases of barrows and gilts by average price No. 2 yellow corn both at Omaha. This ratio represents the number of bushels of corn required to buy 100 pounds of live hogs. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.304

Cold Storage Holdings of Frozen Pork[1] in the U.S. on First of Month In Millions of Pounds

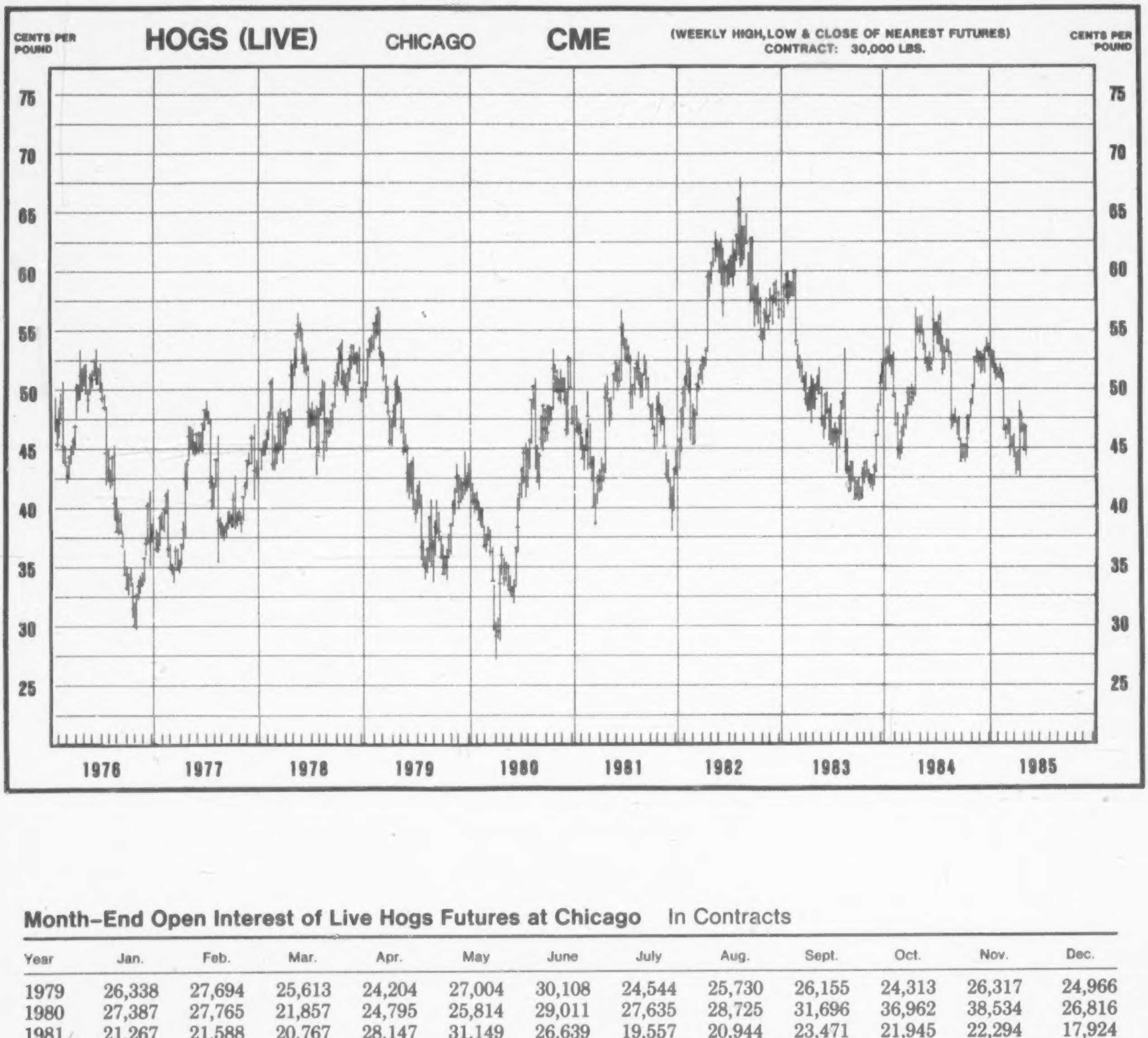
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1980	230.8	285.6	270.4	291.2	345.3	356.5	313.9	263.7	217.3	222.0	269.3	320.7
1981[2]	348.6	350.8	355.9	360.6	403.5	394.4	346.5	283.4	225.1	206.7	238.3	255.2
1982[2]	264.4	247.3	246.3	274.1	—	—	264.1	—	—	183.0	—	—
1983[2]	219.0	224.2	215.8	234.7	272.7	293.0	280.4	253.0	214.1	210.0	240.0	295.2
1984[2]	300.6	295.1	311.7	350.7	390.4	437.7	405.2	345.0	269.5	256.6	275.6	269.4
1985[2]	274.1	291.9	283.8									

[1] Excludes lard. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.303

High, Low & Closing Prices of June Live Hogs Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1982	High	59.90	58.70	58.90	56.60	56.10	53.80	50.60	50.47	46.60	52.65	53.05	56.45	60.00	63.32	62.75	63.32
	Low	56.40	55.82	55.50	53.20	51.05	48.10	47.57	44.65	38.75	45.35	48.35	49.82	55.10	58.85	58.15	438.75
	Close	56.55	58.65	55.50	55.80	51.12	49.00	50.02	45.85	45.67	52.32	49.95	55.47	59.92	62.12	58.82	—
1983	High	53.40	54.00	53.25	53.00	52.50	57.17	55.85	55.30	56.70	58.15	56.45	55.30	51.87	51.87	49.80	5815
	Low	50.60	51.15	48.00	50.10	48.90	51.12	51.65	51.45	53.30	54.60	53.55	51.15	48.25	46.35	45.80	45.80
	Close	53.40	53.47	51.35	52.10	52.15	54.70	52.95	55.00	55.12	55.50	54.07	52.10	49.55	46.62	46.65	—
1984	High	47.75	47.75	46.50	50.50	56.00	55.00	52.15	54.25	53.75	56.00	53.20	57.27	58.00	56.20	54.80	58.00
	Low	46.75	45.40	43.90	43.80	48.90	49.90	49.00	52.20	52.00	52.30	50.40	51.30	54.20	51.35	51.47	43.80
	Close	46.75	45.80	45.15	49.80	53.55	50.05	51.97	53.55	53.05	52.75	51.70	56.12	54.42	51.60	54.17	—
1985	High	53.75	55.20	55.40	54.40	53.15	53.25	51.10	53.67	54.95	54.95	54.22	52.90				
	Low	52.62	53.65	52.60	50.10	50.80	48.65	48.40	50.70	50.25	53.05	50.65	49.05				
	Close	53.60	54.32	54.15	51.00	52.70	48.77	50.95	52.95	54.57	53.85	51.65	49.57				

Source: Chicago Mercantile Exchange T.308



Month-End Open Interest of Live Hogs Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	26,338	27,694	25,613	24,204	27,004	30,108	24,544	25,730	26,155	24,313	26,317	24,966
1980	27,387	27,765	21,857	24,795	25,814	29,011	27,635	28,725	31,696	36,962	38,534	26,816
1981	21,267	21,588	20,767	28,147	31,149	26,639	19,557	20,944	23,471	21,945	22,294	17,924
1982	27,528	29,960	43,387	51,056	63,760	46,002	42,884	51,530	48,263	48,751	47,067	43,791
1983	45,184	41,338	39,469	31,915	31,014	30,794	27,173	33,668	33,425	30.049	30,071	33,820
1984	33,049	35,159	35,289	33,122	34,148	30,517	23,579	24,061	21,048	20,689	26,975	24,037
1985	29,917	27,827	25,738									

Source: Chicago Mercantile Exchange T.309

Volume of Trading of Live Hogs Futures at Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	143.1	137.9	185.4	132.0	145.1	160.9	144.1	164.5	151.3	154.1	162.9	124.5	1,805.7
1980	152.9	122.3	138.3	158.8	133.8	170.8	189.7	188.6	239.1	258.1	195.3	201.4	2,153.8
1981	174.8	182.0	197.5	212.0	230.7	262.9	179.8	153.9	171.9	178.6	160.2	153.7	2,258.1
1982	178.7	195.6	262.6	222.6	288.0	408.3	300.1	344.5	347.2	383.4	324.9	305.1	3,561.0
1983	291.6	254.7	213.8	230.6	254.1	262.1	217.4	279.9	220.8	174.2	197.5	194.2	2,790.7
1984	232.2	212.7	243.8	172.3	211.0	192.6	189.2	143.9	109.1	140.7	181.0	140.5	2,169.0
1985	155.0	128.3	160.2										

Source: Chicago Mercantile Exchange T.310

Honey

The 1984 production of honey in selected countries was expected to total 607,000 tons, 2 percent under the 618,648 tons (revised) harvested in 1983. Because of insect problems and adverse weather conditions a 13,000 ton decline in Mexico's 1984 honey production influenced a 6 percent decrease in North American production as Canada's 1984 honey output remained unchanged at roughly 34,000 tons. On the other hand, good weather conditions prompted a 9 percent increase in the production of Argentina and Brazil, to 33,000 tons and 27,000 tons, respectively. The world's largest honey producer, the Soviet Union, was expected to harvest 198,000 tons of honey in 1984, just above the 1983 level due to increased colony numbers. The Soviet Union's honey output had been plagued by a serious outbreak of varroa and by shortages of apiary supplies for private beekeepers in recent years, but additional losses from disease appear to have been checked.

For 1984-crop honey, the national average support price was set at 65.8 cents per pound, 3.6 cents more than in 1983. Loans on 1984-crop honey were available for extracted honey in 60-pound containers and larger. The support level represented 60 percent of the April 1984 parity price of 109.7 cents per pound. Differentials in price were set for honey according to color and class. Support prices for white or lighter table honey were set at 69 cents per pound. For extra light amber table honey, support was at 65 cents per pound. And for light amber table honey, the support price level was set at 60 cents per pound. The support price for all other types of table honey and for nontable honey was 54 cents per pound. The 1984 loan and purchase program applied to domestically produced honey and loans were obtainable from April 1, 1984 through January 31, 1985. Producers were elegible to apply for support through January 31, 1985. Loans were to mature not later than April 30, 1985.

World Production of Honey In Thousands of Metric Tons

Year	Argentina	Australia	Brazil	Canada	China (Mainland)	Ethiopia	France	W. Germany	Japan	Mexico	Poland	Spain	Turkey	United States	U.S.S.R.	World Total
1977	22.0	14.9	14.0	25.4	60.0	19.0	8.2	20.0	6.2	60.0	10.0	12.0	21.7	81.0	208.0	798.3
1978	35.0	18.6	16.0	30.6	75.0	20.0	9.5	15.0	8.5	54.0	12.0	11.0	21.7	104.5	179.0	827.7
1979	30.0	25.0	18.0	32.9	110.0	20.0	14.4	9.9	7.5	52.0	13.0	12.0	23.7	107.8	189.0	880.1
1980	33.0	19.5	20.0	29.2	81.0	20.5	12.0	13.5	6.2	60.0	10.0	13.0	23.0	90.6	183.0	837.4
1981	30.0	24.8	24.0	32.9	116.0	21.0	10.0	14.0	6.0	60.0	10.0	13.0	23.0	84.3	184.0	879.8
1982	33.0	22.4	25.0	30.5	136.0		25.0	18.0	7.4	45.0				104.3	186.0	908.8
1983[1]	30.0	24.0	22.0	38.8	125.0			19.0	6.9	68.0				93.0	196.0	934.1
1984[1]	33.0	24.5	27.0	44.1	115.0			18.0	7.5	55.0				95.0	198.0	940.0

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.312

Salient Statistics of Honey in the United States

			Honey Production; By States														
Year	Number of Colonies	Yield Per Colony	Total U.S.	California	Florida	Iowa	Minnesota	So. Dak.	Texas	Wisconsin	Domestic Disapp.	Imports For Consumption	Domestic Exports	Stocks Jan. 1	Extracted Florida Extra Light[2]	National Average Price Support	Per Capita Consumption
	Thous.	Lbs.	In Millions of Pounds												¢ Lb.		Lbs.
1977	4,346	41.0	178.1	13.7	14.4	6.1	12.0		9.0	9.6	240.8	63.9	5.5	34.3	40.6	32.7	1.09
1978	4,081	56.7	231.5	31.2	23.9	4.6	13.9		8.7	6.3	277.3	56.0	8.0	30.0	45.1	36.8	1.25
1979	4,155	57.4	238.7	17.1	27.3	6.6	15.8	17.3	11.4	8.8	282.7	58.6	8.8	32.2	50.2	43.9	1.26
1980	4,140	48.3	199.8	23.2	20.3	6.3	13.7	8.1	6.9	6.0	226.2	49.0	8.5	38.0	49.7	50.3	.99
1981[1]	4,213	44.1	185.9	9.0	24.1	3.4	8.2	9.2	11.4	4.1	232.0	77.3	9.2	52.1	52.7	57.4	1.01
1982[1]	4,250	54.1	230.0								250.8	92.0	8.5	74.1	54.5	60.4	1.08
1983[1]	4,275	48.0	205.0								277.9	109.8	7.5	136.8		62.2	1.19
1984[1]	4,350	37.9	165.0								281.0	130.0	7.7	165.2		65.8	

[1] Preliminary. [2] Amber, to Water White, Orange. *Source: Crop Reporting Board, U.S.D.A.* T.313

Wholesale Price Index of Honey (Extracted) at Chicago 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	247.1	245.8	252.5	254.0	255.6	247.4	N.A.	250.5	248.7	248.4	246.4	246.5	249.4
1979	250.0	259.3	270.8	255.8	264.3	286.7	277.7	288.8	283.4	286.4	288.3	283.6	274.6
1980	286.8	289.6	287.1	272.5	284.1	283.0	277.2	283.4	284.0	285.6	285.9	288.7	284.0
1981	298.7	296.9	285.4	299.7	294.3	287.1	296.4	304.4	295.0	305.3	304.9	295.7	297.0
1982	299.7	294.3	306.6	294.3	305.2	305.2	299.7	302.2	306.3	305.2	308.8	295.7	301.9
1983	305.2	310.6	318.8	311.2	305.2	300.8	298.1	293.7	305.2	305.2	316.1	299.7	305.8
1984	302.5	299.7	N.A.	N.A.	299.7	N.A.	N.A.	N.A.	N.A.	299.7	N.A.	N.A.	300.4

Source: Bureau of Labor Statistics (0254-0101.01) T.314

Interest Rates

Concern about the health of the U.S. banking system during 1984 was touched off by problems with energy-related and international loans. In May 1984, these loans had jeopardized the financial health of Continental Illinois Bank and Trust Co., one of the largest U.S. banking institutions. Government intervention and financial assistance provided by a group of major U.S. banks eventually allayed these fears. However, the question of the soundness of U.S. lending institutions influenced interest rate futures trading throughout the remainder of the year.

Considerable strains continued to develop in international financial markets as many developing countries of Latin America accumulated substantial indebtedness to the world's commercial banks. Large multi-national banks refinanced many of these debts while the International Monetary Fund (IMF) entered into agreements with debtor countries for rescheduling and stretchouts. Banking authorities required banks to increase their capital and set up special reserves to better bear the risks of foreign lending.

Liquidity levels at Federal Savings and Loan Insurance Corporation (FSLIC)-insured institutions fell from 12.5 percent of savings plus short-term borrowing at mid-1983 to 10.5 percent at mid-1984. This was still over twice the minimum Federally mandated liquidity requirement. Liquidity at FDIC-insured savings institutions amounted to 10.9 percent of deposits as of August 31, 1984. These institutions traditionally have been high-level holders of liquidity. Borrowings of FSLIC-insured institutions increased from $84.4 billion at mid-1983 to $120.7 billion at mid-1984. Advances (loans) from the Federal Home Loan Banks accounted for $7.3 billion of the increase, and much of the remainder was attributable to the increased use of reverse repurchase transactions.

The sharp recovery of interest rate futures from two-year lows to their 1984 highs was influenced by rapid Fed monetary expansion during the last half of the year. Generally, however, the Fed stuck to its stated policy of fighting inflation, and monetary expansion on balance reflected a desire to keep the growth of the monetary aggregates steady despite the problems caused by the record strength of the dollar. Early in 1985, the Fed announced that M1 money supply growth would be targeted between 4 and 7 percent, the same as a year earlier. M2 would be allowed to grow at a rate between 6 and 9 percent, also the same as a year earlier. M3 growth was set at 6 to 9.5 percent.

Also, early in the year, debate surfaced about the method for allowing the money supply to fluctuate within given target ranges. Traditionally, the Fed had set the base money supply level at an average of the money supply during the fourth quarter of the previous year; from this base, the current year's money supply was allowed to expand within a widening "cone" or "wedge" during the course of the year. However, this procedure often gave the Fed little room to pursue monetary policy during the early part of each year when the "cone" was narrowest. Accordingly, Fed Chairman Volcker proposed a "band" formed by parallel lines running around a central target that would allow equal expansion of the money supply within the target rates at all times during the year.

Futures Markets

Futures in Treasury bonds, T-notes and GNMA securities are traded on the Chicago Board of Trade. Futures in T-bills (90-day), domestic bank CD's, and Eurodollars are traded on the Chicago Mercantile Exchange. Smaller T-bill and T-bond futures contracts are traded on Chicago's MidAmerica Commodity Exchange. Eurodollars, Gilts, and 3-month Sterling Deposits are traded on the London International Financial Futures Exchange.

U.S. Producer Commodity Price Index (Wholesale, All Commodities) 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	254.9	260.2	261.9	262.8	264.2	265.6	270.4	273.8	274.6	277.8	279.1	280.8	268.8
1981	284.8	287.6	290.3	293.4	294.1	294.8	296.2	296.4	295.7	296.1	295.5	295.8	293.4
1982	298.3	298.6	298.0	298.0	298.6	299.3	300.4	300.2	299.3	299.8	300.3	300.7	299.3
1983	299.9	300.9	300.6	300.6	301.5	302.4	303.2	304.7	305.3	306.0	305.5	306.1	303.1
1984[1]	308.0	308.9	311.0	311.3	311.5	311.3	311.9	310.7	309.3	309.4	310.4	309.9	310.3
1985[1]	309.8	309.2											

[1] Preliminary. *Source: Bureau of Labor Statistics*

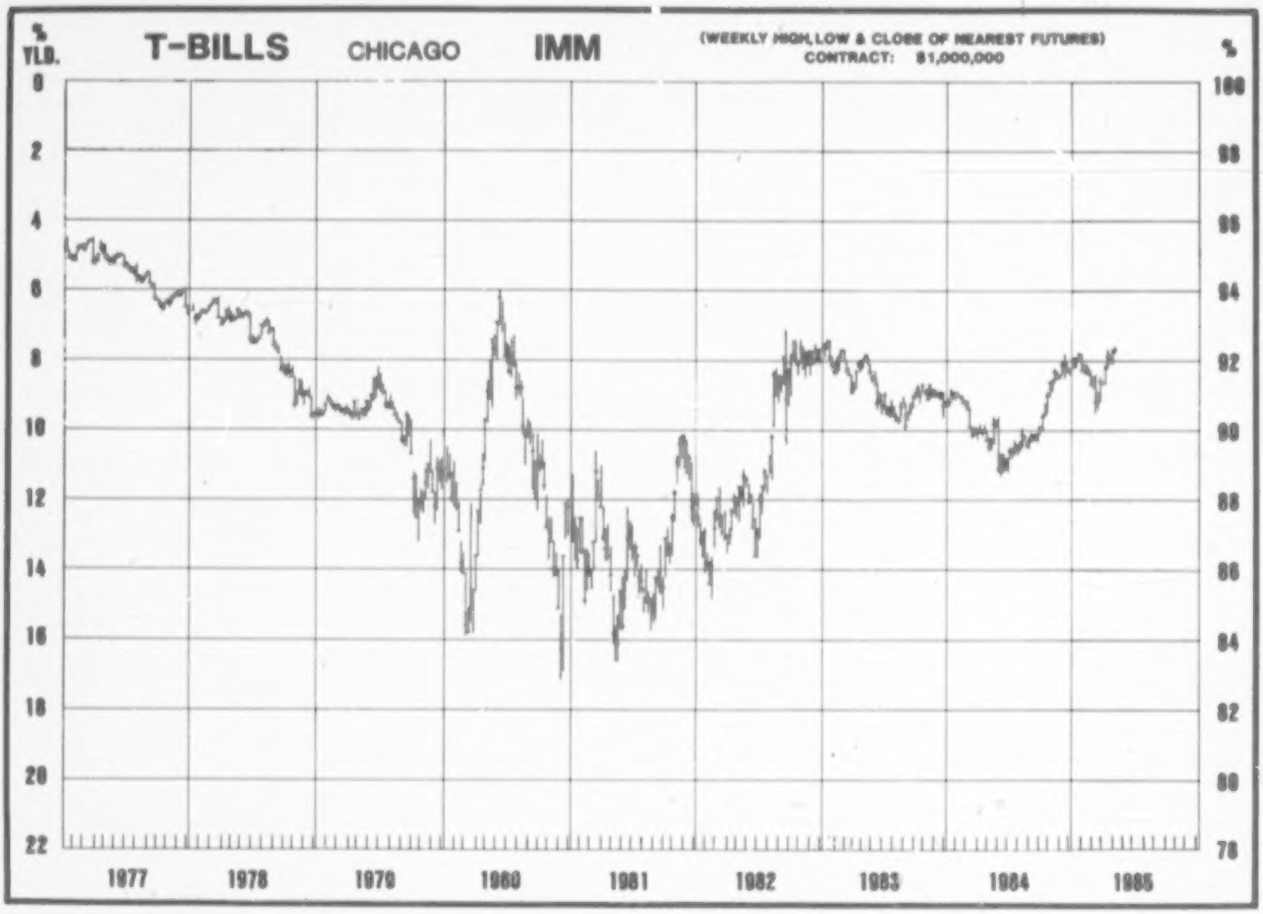
T.315

U.S. Consumer Price Index (Retail Price Index for All Items: Urban Consumers) 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Average
1980	233.2	236.4	239.8	242.5	244.9	247.6	247.8	249.4	251.7	253.9	256.2	258.4	246.8
1981	260.5	263.2	265.1	266.8	269.0	271.3	274.4	276.5	279.3	279.9	280.7	281.5	272.4
1982	282.5	283.4	283.1	284.3	287.1	290.6	292.2	292.8	293.3	294.1	293.6	292.4	289.1
1983	293.1	293.2	293.4	295.5	297.1	298.1	299.3	300.3	301.8	302.6	303.1	303.5	298.4
1984[1]	305.2	306.6	307.3	308.8	309.7	310.7	311.7	313.0	314.5	315.3	315.3	315.5	311.1
1985[1]	316.1	317.4	318.8										

[1] Preliminary. *Source: Bureau of Labor Statistics*

T.316



Month-End Open Interest of 13 Wk.[1] Treasury Bill Futures in Chicago In Thousands of Contracts

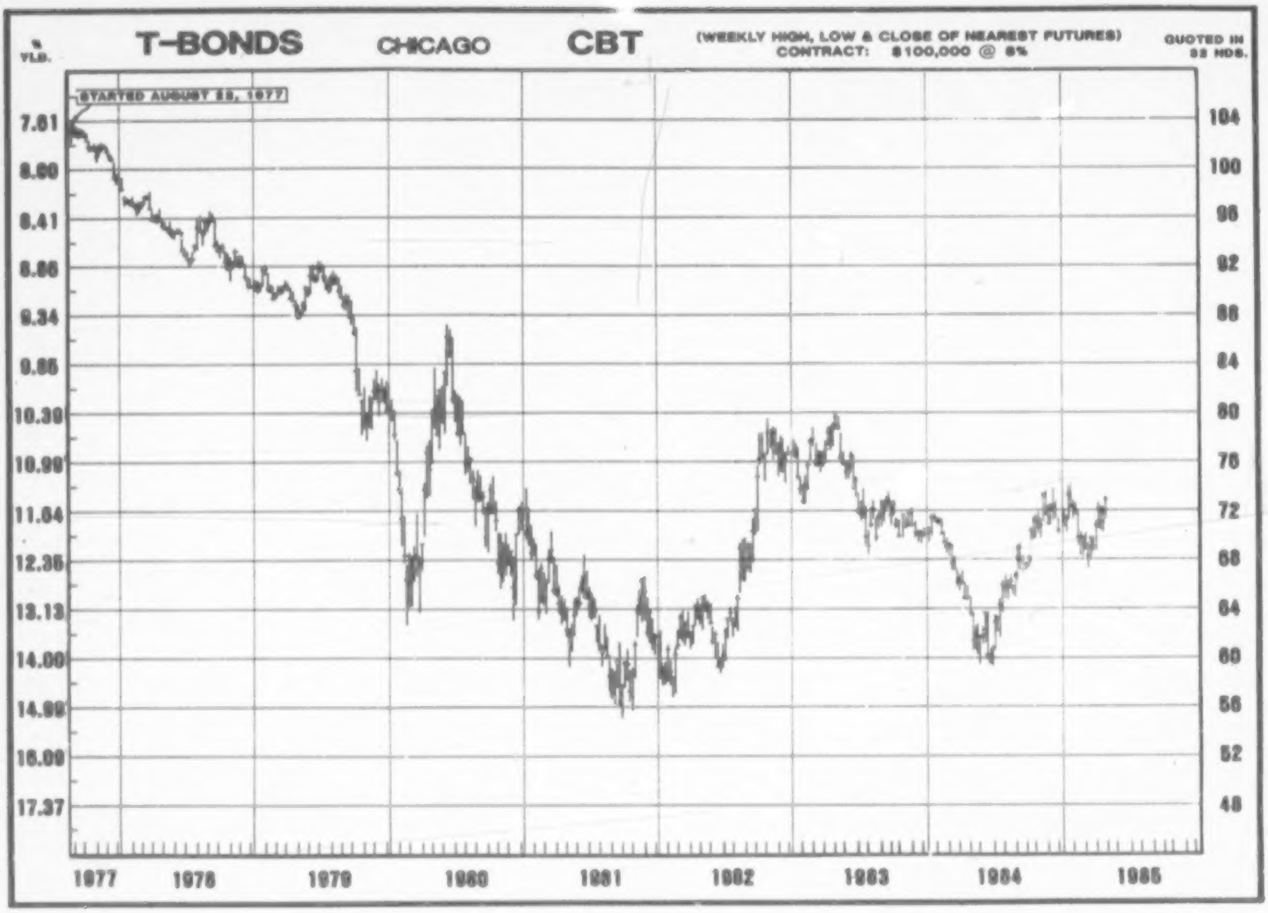
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	12.5	13.7	15.6	17.6	20.3	23.7	27.7	34.4	33.9	47.9	52.6	59.2
1979	54.2	54.2	52.7	56.4	63.7	61.2	46.8	40.9	41.4	35.4	42.8	36.5
1980	30.2	25.0	28.5	28.2	24.7	25.2	22.9	23.1	21.4	24.2	39.2	42.9
1981	45.7	38.0	32.8	28.9	35.6	38.9	45.7	43.6	32.3	38.7	36.2	30.1
1982	33.9	33.0	36.5	43.9	52.5	41.4	52.2	59.6	51.1	45.8	50.1	49.0
1983	47.7	46.8	38.6	44.6	43.8	40.4	45.1	39.9	47.8	51.2	52.4	40.8
1984	48.7	50.8	48.8	55.8	52.4	47.5	43.4	44.9	36.8	47.8	45.7	40.7
1985	48.3	46.3	39.4									

[1] 90-day U.S. Treas. Bill. *Source: International Monetary Market (Chicago)* T.322

Volume of Trading of 13 Wk.[1] Treasury Bill Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	37.9	24.7	33.6	41.9	38.9	48.4	39.9	74.1	87.2	98.6	137.0	106.8	772.0
1979	89.8	78.6	103.8	111.5	154.7	193.1	182.0	144.5	204.1	251.7	225.8	190.9	1,930.5
1980	237.5	245.4	290.3	350.1	321.2	250.7	224.4	204.9	231.1	274.3	287.7	401.1	3,338.8
1981	446.6	414.4	408.5	407.6	426.1	511.0	487.8	482.0	525.8	516.0	509.5	496.5	5,631.3
1982	503.5	465.5	638.7	529.1	595.4	546.0	615.2	738.4	628.6	521.4	442.4	374.7	6,598.8
1983	302.2	337.9	361.4	308.5	331.4	366.2	283.9	371.1	273.5	309.8	275.7	268.5	3,790
1984	200.0	213.4	304.9	300.2	489.1	342.8	315.1	242.5	201.6	203.6	264.0	215.5	3,293
1985	231.3	245.4	314.5										

[1] 90-day U.S. Treas. Bill. *Source: International Monetary Market (Chicago)* T.323



Month-End Open Interest of Treasury Bond Futures in Chicago In Thousands of Contracts

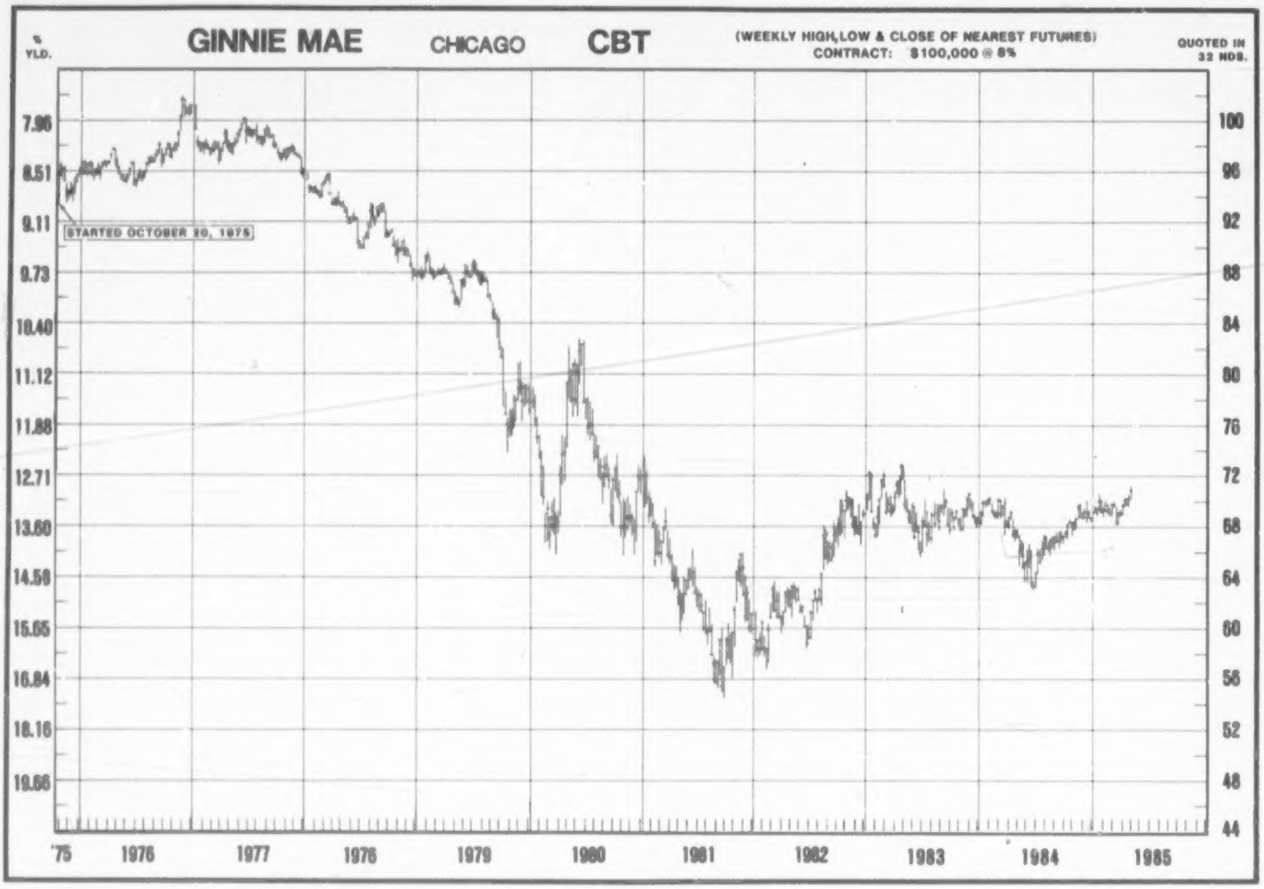
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	3.3	4.4	6.1	8.8	9.7	8.8	10.3	12.6	14.7	27.6	35.7	41.2
1979	41.8	45.0	45.9	46.9	53.9	61.5	63.1	65.7	65.4	65.1	74.1	90.7
1980	71.3	66.4	57.1	70.2	84.8	111.1	110.0	117.2	123.2	153.1	204.8	243.6
1981	240.7	223.6	226.1	230.4	241.3	290.9	315.1	295.4	240.5	257.7	248.7	221.7
1982	216.2	192.9	184.4	193.0	181.8	160.6	158.1	162.7	159.0	160.4	175.7	182.9
1983	177.6	142.9	147.5	142.1	130.3	144.5	165.1	142.5	150.0	172.9	193.4	183.7
1984	170.7	163.0	158.4	173.8	192.3	191.5	192.3	193.0	188.8	244.6	230.5	202.5
1985	208.3	224.2	214.1									

Source: Chicago Board of Trade T.317

Volume of Trading of Treasury Bond Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	11.5	10.2	14.2	19.1	23.4	33.1	37.8	62.2	60.3	87.7	95.2	98.6	555.4
1979	95.3	98.3	95.5	110.4	181.8	169.1	140.5	167.2	221.2	271.1	249.4	259.9	2,059.6
1980	311.1	332.4	349.3	423.4	520.5	608.6	502.7	516.4	501.2	691.6	722.5	1,009.8	6,489.6
1981	846.7	868.6	975.9	998.9	1,178.1	1,094.4	1,081.8	1,191.5	1,313.7	1,289.1	1,691.5	1,377.9	13,908.0
1982	1,266.4	1,306.1	1,413.9	1,259.4	1,408.2	1,254.8	1,145.5	1,669.5	1,474.4	1,644.0	1,545.2	1,352.3	16,739.7
1983	1,333.9	1,447.8	1,600.4	1,262.9	1,679.2	1,704.8	1,579.0	2,312.7	1,605.7	1,839.4	1,687.0	1,497.8	19,551
1984	1,475.7	1,891.3	2,629.4	2,068.7	3,373.8	2,593.9	2,691.7	2,792.2	2,556.6	2,924.2	2,781.2	2,184.9	29,963
1985	2,973.6	3,249.9	2,905.5										

Source: Chicago Board of Trade T.319



Month-End Open Interest of GNMA (CDR) Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	20.4	19.6	20.3	24.0	27.8	33.5	39.4	43.6	41.6	54.4	60.0	62.7
1979	62.4	63.5	62.9	62.8	68.5	73.3	70.6	75.0	77.0	71.0	76.3	89.0
1980	65.9	54.7	46.1	55.5	60.6	71.9	67.6	63.1	67.1	83.2	98.5	115.2
1981	97.0	97.1	99.8	105.7	107.5	121.0	133.9	116.6	96.5	95.2	82.7	77.2
1982	70.0	61.1	64.3	69.3	58.0	51.9	51.8	44.0	45.4	42.2	41.9	40.0
1983	34.9	35.4	45.6	41.3	42.4	44.9	50.0	52.4	45.6	42.2	43.4	37.4
1984	39.1	41.3	36.8	34.7	34.8	24.0	19.1	19.5	10.7	9.9	9.3	7.6
1985	7.4	5.4	3.4									

Source: Chicago Board of Trade T.325

Volume of Trading of GNMA (CDR) Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	48.4	46.7	57.1	57.2	60.1	75.2	73.6	109.2	96.1	110.9	109.0	109.6	953.2
1979	89.8	79.8	68.1	82.0	99.8	111.8	77.0	95.3	164.9	164.9	157.9	180.4	1,371.1
1980	170.0	155.5	156.3	190.3	219.7	248.4	162.0	151.6	133.9	205.0	214.5	318.7	2,326.3
1981	179.8	159.9	186.5	202.3	228.8	188.5	162.0	156.2	189.8	194.0	242.2	202.8	2,292.9
1982	188.8	184.1	182.6	140.6	159.3	156.3	154.8	222.7	170.5	218.3	143.6	134.0	2,055.6
1983	143.5	133.8	147.7	125.3	176.0	177.7	199.9	166.6	90.9	99.2	126.4	105.2	1,692.0
1984	67.3	118.2	168.9	80.6	97.4	96.4	57.6	62.7	48.6	24.6	23.9	16.2	862.5
1985	13.7	15.2	7.2										

Source: Chicago Board of Trade T.324

High, Low & Closing Prices of June Treasury Bond Futures in Chicago   In 32nds of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1979	High	95–07	94–10	93–16	92–28	95–06	96–03	94–09	93–31	93–15	92–08	92–09	90–27	90–19	90–09	91–01	98–11
	Low	93–29	92–20	91–26	91–03	92–15	93–08	91–00	92–02	90–09	90–01	89–13	89–09	88–02	87–20	89–16	89–20
	Close	94–03	92–20	91–28	92–20	94–21	93–08	91-11	92–30	90–18	91–23	89–21	90–05	88–06	89–22	90–30	—
1980	High	90–31	90–18	92–13	92–12	91–18	89–18	87–13	84–14	85–00	82–24	75–07	71–24	77–27	83–20	87–07	95–31
	Low	88–24	88–08	89–24	89–27	89–09	87–05	78–11	78–15	80–20	74–07	63–15	64–30	67–12	77–00	78–09	63–15
	Close	88–27	89–31	91–27	90–20	89–11	87–21	80–12	83–01	82–29	75–04	69–00	67–27	77–02	79–14	85–25	—
1981	High	79–21	84–00	85–15	81–08	77–00	75–23	75–04	71–20	73–18	74–22	70–15	70–15	67–17	64–30	67–16	88–08
	Low	71–23	76–30	77–31	74–26	71–27	69–11	67–22	66–05	65–28	69–04	64–05	64–20	61–25	59–11	64–04	59–11
	Close	77–16	79–03	80–23	75–04	73–26	71–10	68–17	70–02	72–06	70–09	65–31	67–02	61–28	64–24	65–13	—
1982	High	68–14	67–25	69–29	66–23	64–30	62–04	61–09	66–24	66–14	62–16	62–26	64–08	64–27	65–05	62–18	74–20
	Low	64–11	62–19	65–28	62–28	59–04	56–08	56–12	58–30	60–20	58–05	57–10	60–22	61–05	62–15	59–01	56–08
	Close	64–15	67–17	65–30	63–01	59–17	57–03	59–05	65–21	62–04	61–01	61–14	61–30	63–06	62–27	59–24	—
1983	High	67–20	66–25	63–30	65–06	69–29	71–05	77–04	77–20	76–24	77–04	77–13	78–08	79–02	80–00	76–29	80–00
	Low	63–22	64–15	60–29	61–27	63–18	67–17	70–09	73–18	73–21	72–14	71–27	74–28	75–31	74–20	73–24	57–28
	Close	65–11	64–15	62–19	64–01	67–20	70–27	75–11	73–28	76–00	72–21	76–22	75–31	78–30	74–21	73–27	—
1984	High	77–00	77–28	74–29	73–05	71–12	72–02	75–15	70–31	70–20	71–06	70–26	68–22	67–00	64–31	63–21	77–28
	Low	74–13	72–29	72–00	67–26	66–28	68–09	69–18	68–23	68–05	68–30	67–22	65–22	64–17	59–16	60–11	58–28
	Close	77–00	72–30	73–03	68–16	68–12	71–23	69–19	70–17	69–15	70–07	68–07	66–07	64–22	60–05	61–19	—
1985	High	65–06	63–06	61–16	63–10	65–04	67–20	70–03	72–05	72–00	73–07	70–14	69–24				
	Low	62–29	57–20	58–05	58–00	62–29	63–12	65–19	68–10	69–15	69–09	66–10	67–08				
	Close	62–31	58–10	58–07	63–01	64–06	66–05	69–14	70–10	70–11	72–03	66–15	69–23				
1986	High	63–31	62–06	60–15	62–14	64–03	66–06	68–06	70–06	69–26	70–16	69–14	66–19				
	Low	61–30	56–29	57–09	57–05	61–31	62–09	64–09	66–25	67–23	67–06	65–16	64–27				
	Close	62–01	57–19	57–09	62–02	63–00	64–25	67–22	68–19	68–12	69–14	65–16	66–18				

Source: Chicago Board of Trade

T.320

High, Low & Closing Prices of June GNMA (CDR) Futures in Chicago   In 32nds of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1979	High	92–15	91–18	89–23	90–08	91–31	92–16	91–13	90–29	90–17	89–16	89–22	88–20	88–09	87–16	88–19	96–20
	Low	91–12	89–10	88–06	87–31	89–24	90–11	88–26	89–15	87–21	87–17	87–12	87–19	85–27	85–14	86–23	85–14
	Close	91–15	89–10	88–07	89–31	91–14	90–24	89–00	90–02	87–30	89–04	87–26	88–00	85–31	86–28	87–20	—
1980	High	88–12	87–09	88–21	88–26	88–03	85–28	82–00	81–16	82–13	79–11	74–11	70–10	76–08	82–05	82–12	93–20
	Low	85–30	85–19	86–20	86–30	85–28	81–27	73–18	75–00	75–16	73–04	65–22	65–18	67–15	76–16	76–18	65–18
	Close	86–02	86–23	88–06	87–16	85–29	82–10	75–31	79–27	79–18	74–00	69–06	68–15	76–00	77–31	81–18	—
1981	High	77–00	82–12	82–02	77–22	74–24	73–15	73–12	70–20	73–04	74–07	70–15	69–16	67–01	64–00	65–16	91–02
	Low	69–02	76–07	76–06	72–23	69–28	68–11	67–06	66–13	65–31	69–00	65–14	65–19	61–30	59–21	63–03	58–21
	Close	76–16	77–15	77–15	73–03	71–14	70–05	67–31	69–07	71–27	70–08	66–21	66–21	62–01	63–23	63–22	—
1982	High	67–06	66–05	67–05	63–03	62–16	60–04	60–12	65–23	65–00	61–07	61–30	63–00	63–07	63–17	61–30	82–16
	Low	63–05	62–14	63–08	60–31	57–10	54–22	55–00	59–10	59–16	57–15	56–19	59–17	60–04	60–29	59–23	54–22
	Close	63–05	65–31	63–08	61–05	57–14	55–15	59–17	64–15	60–29	60–02	60–18	60–20	61–22	62–04	60–04	—
1983	High	62–15	62–23	60–15	61–27	66–12	67–11	69–10	70–00	68–21	71–19	70–27	71–10	72–00	73–00	69–30	73–00
	Low	59–17	60–16	57–21	58–14	60–07	63–19	65–16	65–30	65–22	66–15	66–04	68–04	69–09	68–09	67–01	54–28
	Close	61–03	60–25	59–05	60–28	63–31	66–04	68–11	66–02	68–11	66–22	70–12	69–07	71–27	68.10	67–05	—
1984	High	67–25	70–09	67–31	67–20	67–07	67–29	67–23	68–21	68–05	69–10	69–15	69–15	69–07	67–25	66–20	70–09
	Low	65–03	66–03	65–10	64–14	64–05	65–25	66–01	66–00	66–28	67–09	67–21	67–13	66–29	63–22	63–17	54–29
	Close	67–20	66–03	66–06	65–08	65–11	67–06	66–21	68–06	67–18	68–31	68–08	68–05	67–16	64–01	64–16	—
1985	High	66–02	64–16	62–13	64–05	64–13	66–14	67–13	68–20	68–17	68–12	69–14	69–08				
	Low	64–07	59–29	60–16	60–25	63–19	63–29	65–11	66–11	67–07	66–26	68–07	68–03				
	Close	64–09	60–05	60–22	63–12	64–04	65–18	66–12	67–15	67–22	67–26	68–09	69–00				
1986	High	—	—	60–18	62–22	62–28	64–18	65–05	67–04	66–16	67–08	67–08	66–22				
	Low	—	—	58–29	59–16	61–19	62–00	63–07	64–28	65–12	65–28	65–29	65–21				
	Close	—	—	59–12	61–25	62–07	63–16	64–25	65–25	65–24	66–27	65–29	66–22				

Source: Chicago Board of Trade

T.326

High, Low & Closing Prices of June 13 Wk. Treasury Bill Futures in Chicago In Points of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	93.59	93.31	93.69	93.57	93.50	93.51	93.28	93.28	93.29	93.17	93.15	93.33	93.49	93.48	93.41	93.80
	Low	92.52	92.53	93.19	93.01	92.95	93.10	92.80	92.92	92.95	92.63	92.78	93.00	93.03	93.09	93.20	92.26
	Close	92.60	93.22	93.61	93.15	93.38	93.29	92.97	93.25	93.13	92.99	93.13	93.02	93.13	93.21	93.23	—
1979	High	92.12	91.87	91.90	91.81	92.11	92.12	91.55	91.08	90.83	90.74	90.88	90.72	90.87	90.84	91.45	92.83
	Low	91.76	91.62	91.49	91.51	91.62	91.40	90.50	90.39	90.14	90.16	90.35	90.43	90.31	90.30	90.50	90.14
	Close	91.76	91.68	91.55	91.75	91.93	91.51	90.58	90.62	90.22	90.65	90.47	90.51	90.50	90.60	91.06	—
1980	High	90.91	91.55	92.59	92.50	92.30	91.65	91.41	91.22	91.01	90.50	89.05	86.40	89.94	92.73	93.97	93.97
	Low	90.51	90.48	91.34	91.54	90.93	90.36	88.10	88.85	89.21	88.37	86.06	84.20	85.40	89.75	92.00	84.20
	Close	90.62	91.46	92.32	91.89	91.11	91.03	89.29	90.55	90.17	88.84	86.49	85.82	89.90	92.30	92.12	—
1981	High	90.90	92.00	92.64	92.04	91.10	89.61	89.77	88.47	88.89	89.43	89.00	89.38	88.95	85.90	86.48	92.64
	Low	87.51	90.60	91.15	90.65	88.45	87.66	87.47	87.08	85.40	87.31	86.36	86.64	85.52	83.35	84.34	83.35
	Close	90.79	91.60	91.50	90.72	89.13	88.31	87.51	87.25	88.18	88.89	87.19	88.77	85.55	85.39	85.79	—
1982	High	89.20	87.81	88.47	87.86	87.52	87.00	87.61	89.54	89.42	87.85	87.48	88.32	88.16	88.94	88.46	91.26
	Low	87.09	86.03	87.40	86.91	85.95	85.48	85.53	87.42	86.93	85.85	85.45	86.46	86.67	87.41	87.16	85.45
	Close	87.10	87.73	87.92	87.21	86.08	85.60	87.55	89.19	87.76	86.90	86.92	86.83	87.88	88.57	87.18	—
1983	High	87.37	87.82	87.56	87.93	89.12	89.66	91.19	91.43	91.94	92.26	92.40	92.28	92.04	92.22	91.65	92.40
	Low	86.45	87.00	86.32	86.75	87.63	87.95	89.29	90.57	90.67	91.41	91.26	91.12	91.20	91.28	91.12	85.83
	Close	87.29	87.64	86.77	87.72	88.11	89.63	90.70	90.61	91.92	91.45	92.19	91.20	91.98	91.30	91.15	—
1984	High	91.23	91.47	90.60	90.44	90.06	90.51	90.66	90.57	90.47	90.82	90.78	90.48	90.18	90.36	90.37	91.47
	Low	90.63	90.33	90.11	89.55	89.30	89.57	90.32	90.13	90.00	90.32	90.28	89.79	89.77	89.44	90.12	86.50
	Close	91.23	90.34	90.39	89.60	89.59	90.46	90.39	90.39	90.44	90.72	90.38	89.97	89.94	90.18	90.28	—
1985	High	88.92	88.60	87.95	88.47	88.90	89.51	90.12	91.13	91.46	91.81	91.47	91.49				
	Low	88.46	87.16	87.14	87.17	88.28	88.53	89.09	89.45	90.69	91.14	90.78	90.39				
	Close	88.52	87.25	87.20	88.28	88.69	89.15	90.10	90.70	91.16	91.54	90.80	91.41				

Source: International Monetary Market (Chicago)

T.321

U.S. Industrial Production Index[1] (Seasonally Adjusted) 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	115.2	112.7	111.7	112.6	113.7	116.4	118.4	121.0	122.1	122.2	123.5	124.4	117.8
1976	126.1	128.1	128.7	129.0	130.1	130.7	131.2	132.0	131.3	131.3	132.6	133.6	130.5
1977	133.7	134.5	136.3	137.1	138.0	138.9	139.0	139.3	139.6	140.1	140.3	140.5	138.2
1978	140.0	140.3	142.1	144.4	144.8	146.1	147.1	148.0	148.6	149.7	150.6	151.8	146.1
1979	152.0	152.5	153.5	151.1	152.7	153.0	153.0	152.1	152.7	152.7	152.3	152.5	152.5
1980	153.0	152.8	152.1	148.2	143.8	141.4	140.3	142.2	144.4	146.6	149.2	150.4	147.0
1981	151.4	151.8	152.1	151.9	152.7	152.9	153.9	153.6	151.6	149.1	146.3	143.4	151.0
1982	140.7	142.9	141.7	140.2	139.2	138.7	138.8	138.4	137.3	135.7	134.9	135.2	138.6
1983	137.4	138.1	140.0	142.6	144.4	146.4	149.7	151.8	153.8	155.0	155.3	156.2	147.6
1984[2]	158.5	160.0	160.8	162.1	162.8	164.4	165.9	166.0	165.0	164.4	164.8	165.0	163.4
1985[2]	165.5	164.7											

[1] Total Index of the Federal Reserve Index of Quantity Output. [2] Preliminary. *Source: Federal Reserve System*

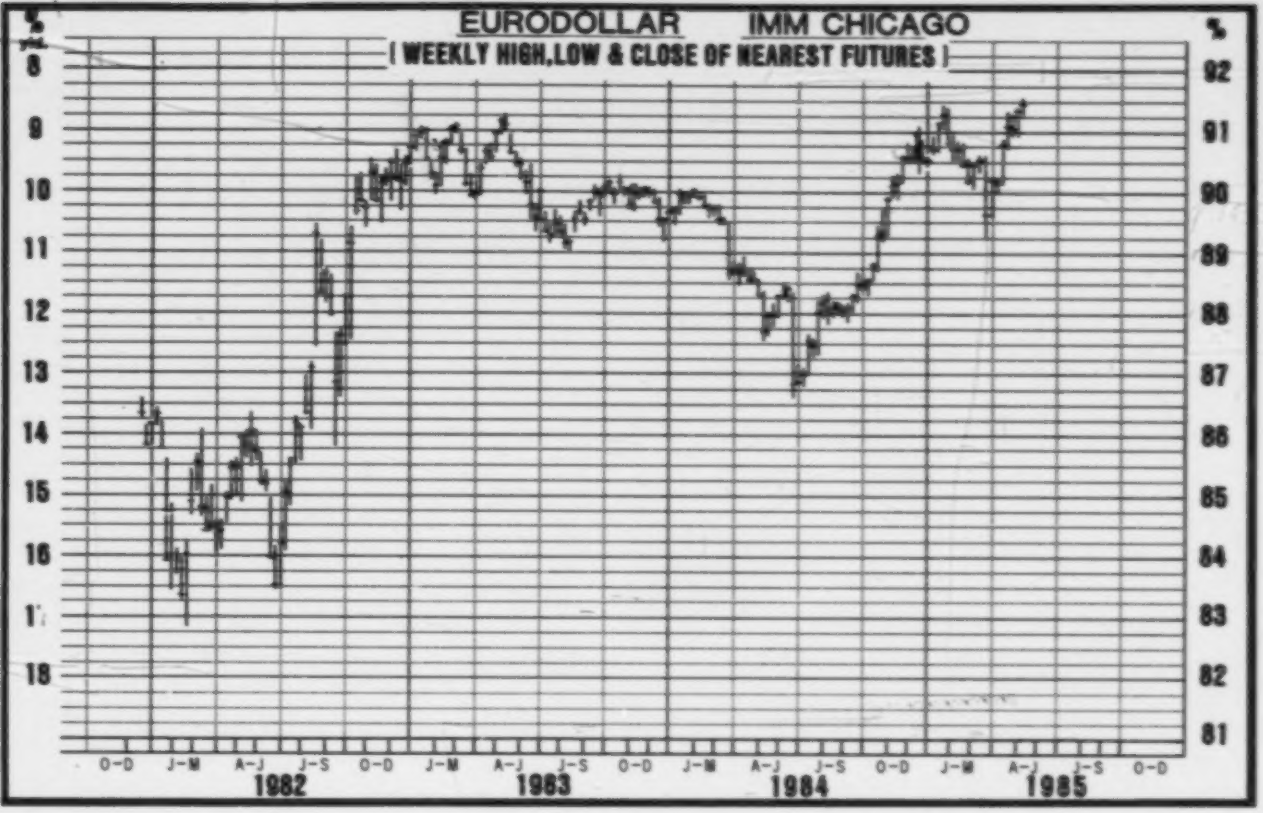
T.318

U.S. Federal Funds Rate In Percent

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1975	7.13	6.24	5.54	5.49	5.22	5.55	6.10	6.14	6.24	5.82	5.22	5.20	5.82
1976	4.87	4.77	4.84	4.82	5.29	5.48	5.31	5.29	5.25	5.03	4.95	4.65	5.05
1977	4.61	4.68	4.69	4.73	5.35	5.39	5.42	5.90	6.14	6.47	6.51	6.56	5.54
1978	6.70	6.78	6.79	6.89	7.36	7.60	7.81	8.04	8.45	8.96	9.76	10.03	7.93
1979	10.07	10.06	10.09	10.01	10.24	10.29	10.47	10.94	11.43	13.77	13.18	13.78	11.19
1980	13.82	14.13	17.19	17.61	10.98	9.47	9.03	9.61	10.87	12.81	15.85	18.90	13.36
1981	19.08	15.93	14.70	15.72	18.52	19.10	19.04	17.82	15.87	15.08	13.31	12.37	16.38
1982	13.22	14.78	14.68	14.94	14.45	14.15	12.59	10.12	10.31	9.71	9.20	8.95	12.26
1983	8.68	8.51	8.77	8.80	8.63	8.98	9.37	9.56	9.45	9.48	9.34	9.47	9.09
1984	9.56	9.59	9.91	10.29	10.32	11.06	11.23	11.64	11.30	9.99	9.43	8.38	10.23
1985	8.35	8.50	8.63										

Source: U.S. Dept. of Commerce.

T.318a



High, Low & Closing Prices of June Eurodollar Futures in Chicago In Points of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1984	High	—	—	89.47	89.45	88.85	89.53	89.60	89.40	89.38	89.70	89.68	89.30	88.90	88.57	88.50	89.70
	Low	—	—	89.06	88.37	88.04	88.38	89.26	88.97	88.71	89.14	89.09	88.57	88.47	87.59	88.15	87.59
	Close	—	—	89.44	88.46	88.43	89.46	89.26	89.26	89.31	89.58	89.19	88.72	88.54	88.03	88.38	—
1985	High	87.35	86.89	86.18	87.03	87.47	88.30	88.94	89.92	90.23	90.88	90.50	90.25				
	Low	86.74	84.83	85.17	85.27	86.78	86.69	87.66	88.85	89.39	89.83	89.42	88.97				
	Close	86.80	84.99	85.30	86.82	86.99	87.82	88.87	89.47	89.88	90.57	89.45	90.23				

Source: International Monetary Market (IMM)—Chi. Merc. Exch. T.0564

Month-End Open Interest of Eurodollar Futures in Chicago In Thousands of Contracts

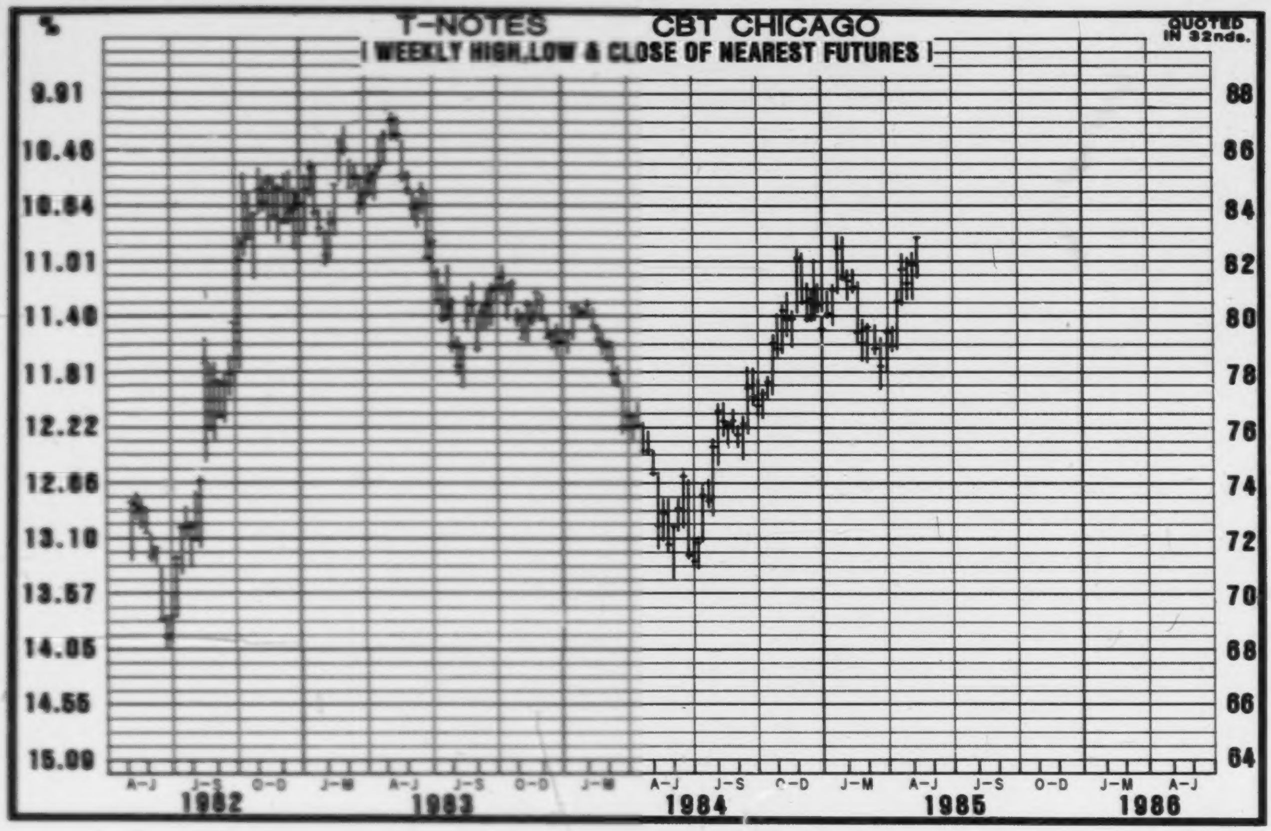
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	22.2	21.5	21.9	22.9	23.4	27.4	31.9	31.8	34.0	43.1	45.4	45.6
1984	50.3	60.6	62.0	74.2	90.3	89.3	95.1	94.6	78.1	89.9	96.2	85.1
1985	105.5	105.5	98.4									

Source: International Monetary Market (IMM)—Chi. Merc. Exch. T.0564A

Volume of Trading of Eurodollar Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1983	41.3	48.4	70.3	52.0	56.3	96.5	72.1	91.8	78.6	81.3	87.1	115.3	891.1
1984	104.8	127.4	235.4	202.2	434.7	448.1	438.6	354.5	435.3	491.1	532.4	388.4	4,193
1985	524.7	723.6	877.2										

Source: International Monetary Market (IMM)—Chi. Merc. Exch. T.0564B



High, Low & Closing Prices of June T-Note Futures in Chicago In 32nds of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year					Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1984	High	—	—	80-30	79-19	79-07	80-07	80-24	79-21	79-05	79-25	79-23	78-09	76-28	75-09	74-12	80-30
	Low	—	—	80-02	76-31	75-19	77-02	78-13	77-26	77-16	78-03	77-17	75-24	74-29	70-17	71-14	70-17
	Close	—	—	80-28	77-01	76-28	79-30	78-13	79-06	78-12	79-11	78-00	76-02	75-03	71-05	72-14	—
1985	High	—	—	70-15	73-23	75-03	77-07	79-03	81-07	80-22	82-03	80-28	79-18				
	Low	—	—	69-23	71-16	73-30	74-15	75-24	78-05	78-16	78-19	77-19	77-11				
	Close	—	—	69-17	73-23	74-10	76-02	78-25	79-09	79-07	81-07	77-28	79-14				

Source: Chicago Board of Trade T.0565

Month-End Open Interest of T-Note Futures in Chicago In Thousands of Contracts

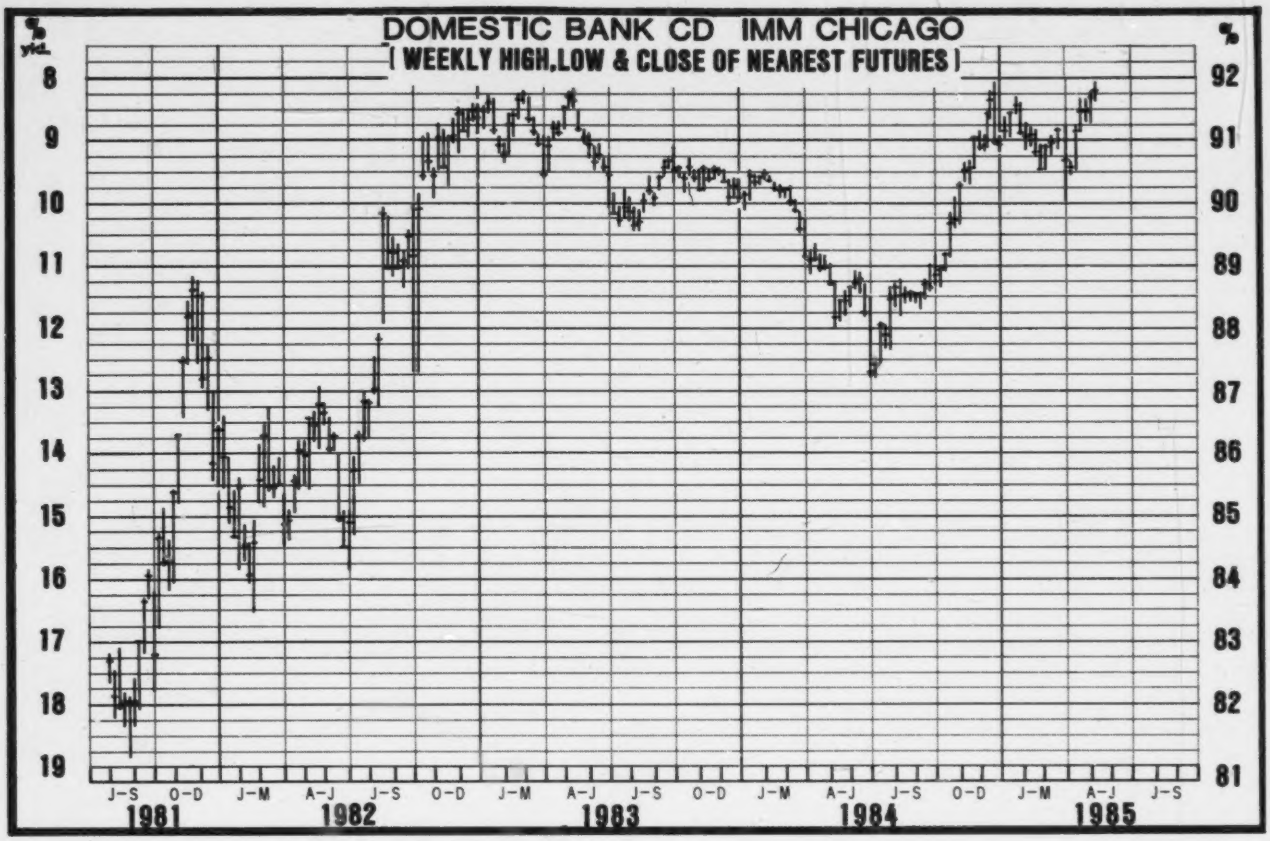
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	10.3	9.6	7.9	8.0	6.7	8.7	9.5	12.9	10.1	13.2	15.3	14.2
1984	19.6	23.3	21.8	28.1	32.5	32.3	36.5	32.8	30.3	34.7	33.7	36.0
1985	41.4	48.7	43.9	44.2								

Source: Chicago Board of Trade T.0565A

Volume of Trading of T-Note Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1983	62.7	76.9	71.5	51.7	69.6	68.8	61.1	93.9	60.3	57.7	74.8	65.5	814.5
1984	59.7	110.5	126.8	105.3	199.1	145.1	147.2	162.8	139.5	149.2	166.0	150.7	1,662
1985	171.8	216.0	215.5										

Source: Chicago Board of Trade T.0565B



High, Low & Closing Prices of June Domestic Bank (3 Month) CD Futures in Chicago In Points of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1984	High	—	—	—	89.82	89.25	89.88	89.93	89.74	89.75	90.14	90.10	89.75	89.34	89.00	88.89	90.14
	Low	—	—	—	88.78	88.45	88.77	89.59	89.30	89.11	89.52	89.54	88.99	88.89	88.00	88.20	88.00
	Close	—	—	—	88.87	88.82	89.80	89.59	89.62	89.69	90.00	89.63	89.13	88.96	88.46	88.33	—
1985	High	87.76	87.31	86.65	87.45	87.90	88.69	89.33	90.29	90.61	91.21	90.78	91.65				
	Low	87.14	85.30	85.60	85.71	87.22	87.13	88.08	89.24	89.78	90.23	89.82	90.45				
	Close	87.21	85.46	85.75	87.27	87.43	88.24	89.26	89.86	90.28	90.89	89.84	91.59				

Source: International Monetary Market (IMM)—Chi. Merc. Exch. T.0566

Month-End Open Interest of Domestic Bank (3 Month) CD Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	16.0	14.6	13.2	13.0	14.7	14.9	18.8	19.5	20.5	24.9	23.6	24.0
1984	27.5	28.5	31.0	36.2	34.8	29.4	28.6	25.0	20.0	19.0	16.8	14.6
1985	13.6	12.3	6.7									

Source: International Monetary Market (IMM)—Chi. Merc. Exch. T.0566A

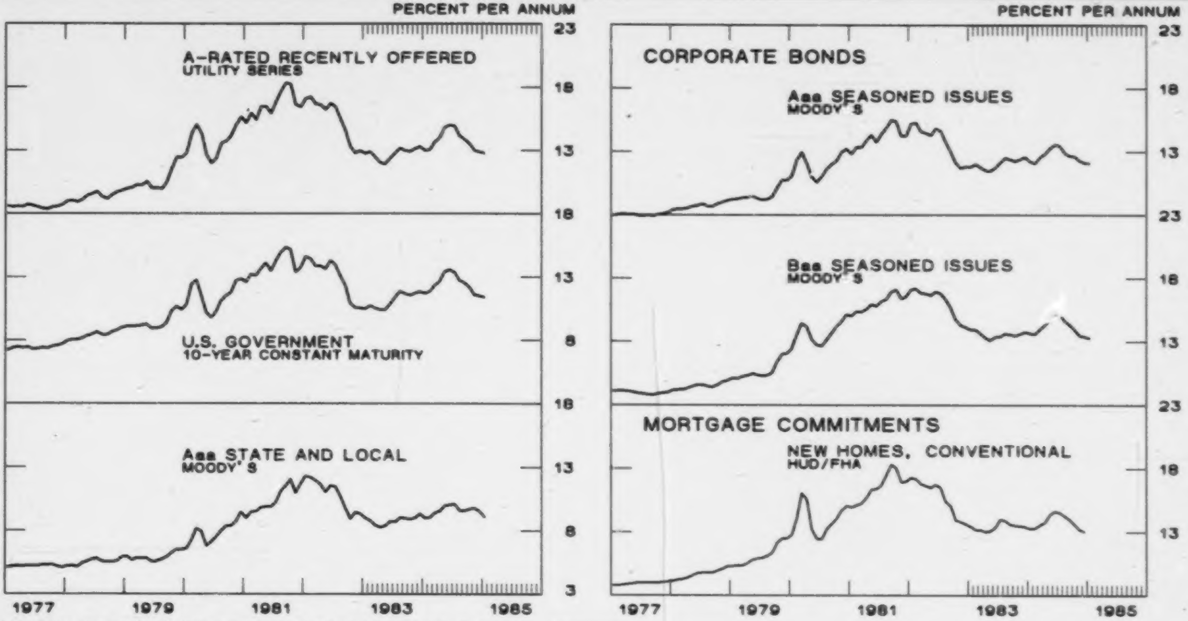
Volume of Trading of Domestic Bank (3 Month) CD Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1983	67.5	86.8	94.7	70.0	83.4	128.9	90.0	118.3	85.9	78.3	79.0	96.8	1,080
1984	74.5	81.6	134.4	110.2	187.7	114.4	66.3	51.1	41.3	22.9	25.0	19.2	928.7
1985	14.1	12.4	17.3										

Source: International Monetary Market (IMM)—Chi. Merc. Exch. T.0566B

LONG-TERM INTEREST RATES

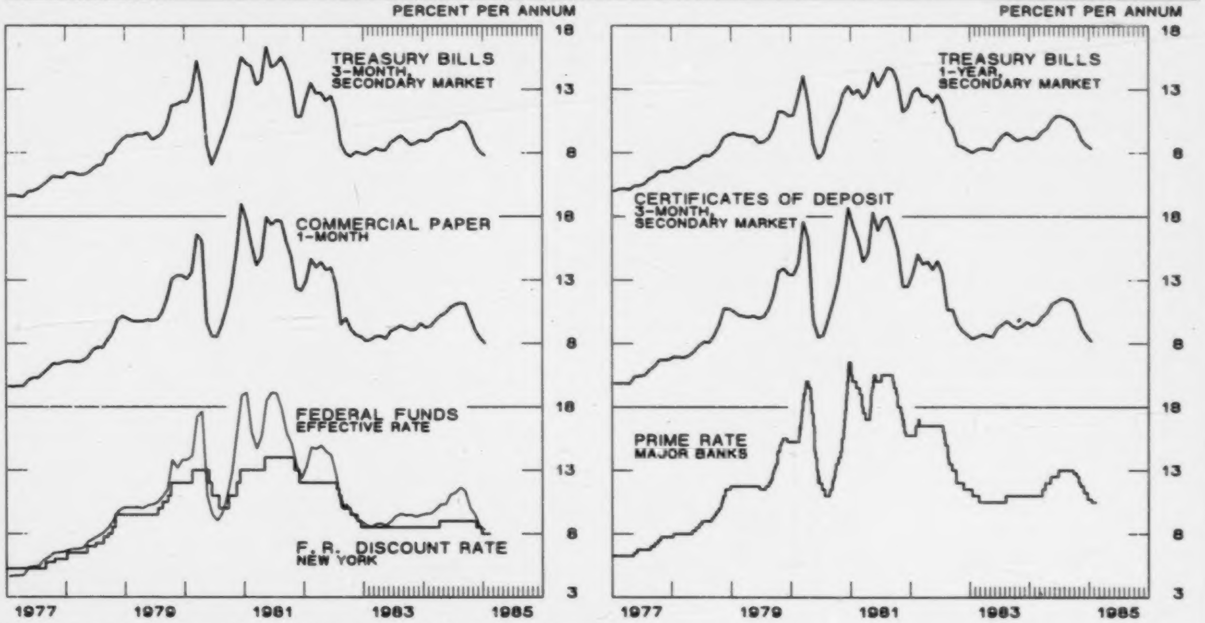
MONTHLY AVERAGES



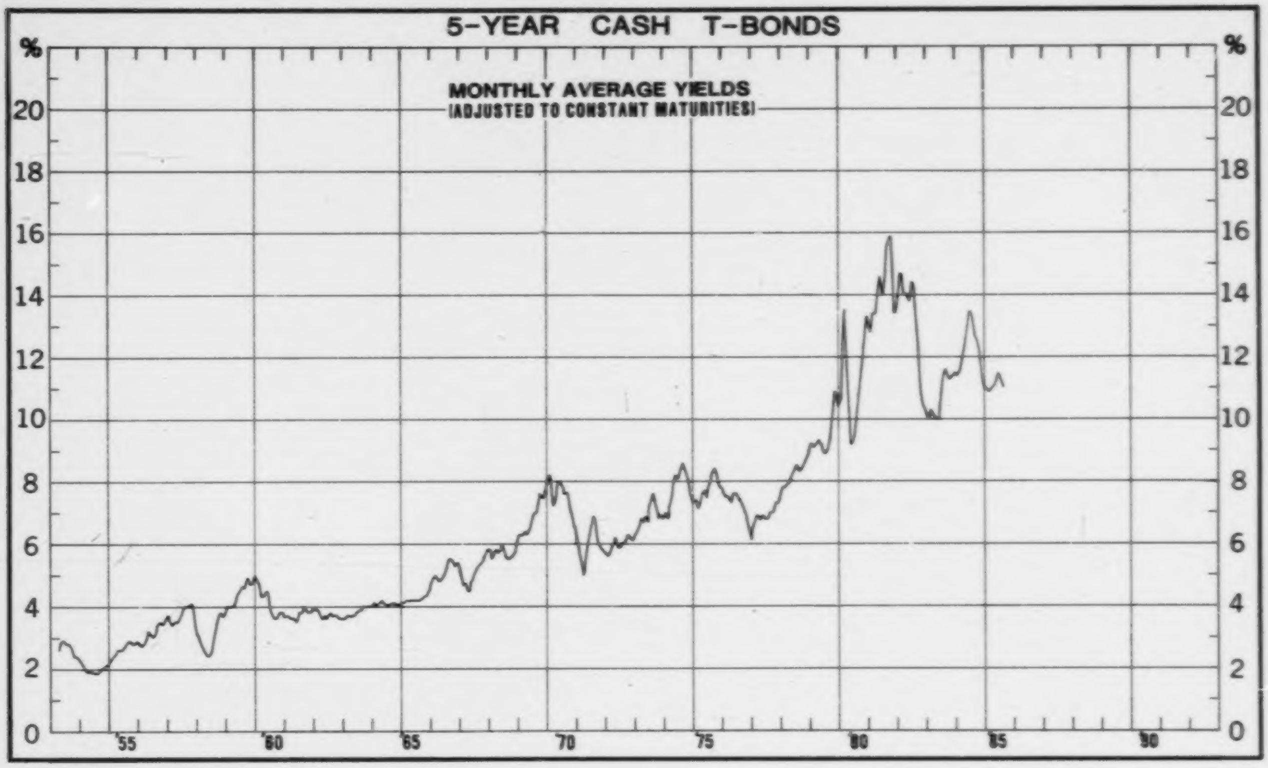
SOURCE: Board of Governors of the Federal Reserve System.

SHORT-TERM INTEREST RATES

MONTHLY AVERAGES, EXCEPT FOR DISCOUNT AND PRIME RATES, WHICH ARE EFFECTIVE DATES OF CHANGE



SOURCE: Board of Governors of the Federal Reserve System.



5-YEAR CASH T-BONDS

U.S. Money Supply M1 in 1972 $ In Billions of Dollars

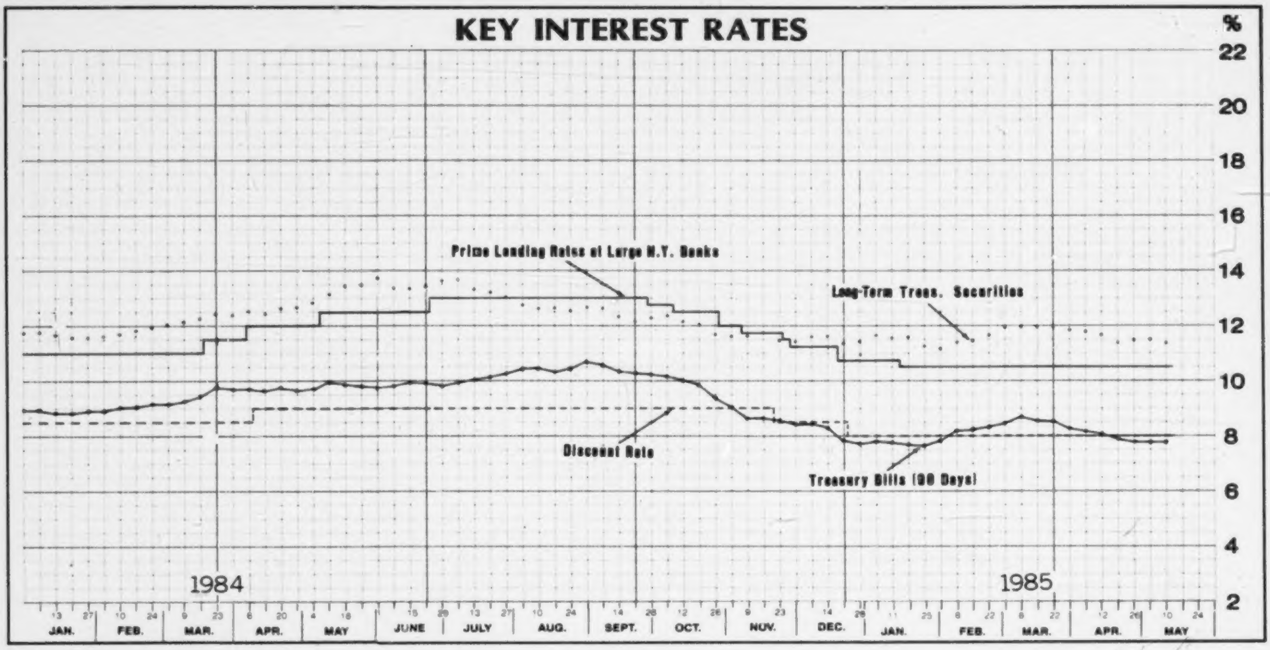
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	222.5	223.9	224.1	224.5	225.0	224.1	223.8	223.9	223.7	224.9	225.0	225.3	224.2
1977	221.2	220.9	221.0	221.5	221.2	220.9	221.2	221.2	221.8	222.6	222.8	223.1	221.6
1978	224.3	223.1	222.7	223.6	223.7	223.3	222.6	222.1	222.6	221.0	221.2	221.4	222.6
1979	222.4	220.8	220.6	221.9	219.6	219.7	219.3	218.3	216.8	215.0	213.4	211.9	218.3
1980	209.9	209.0	206.2	201.6	199.3	199.7	201.7	203.9	204.7	204.9	203.6	200.2	204.2
1981	200.5	200.0	200.3	202.0	199.9	198.2	197.1	196.5	194.9	194.3	194.8	196.4	197.8
1982	199.2	197.9	198.0	198.2	197.1	195.3	194.5	196.1	198.5	200.6	203.2	205.6	198.7
1983	206.7	209.2	211.4	211.5	213.4	214.6	215.8	216.6	216.7	217.4	217.6	217.7	213.8
1984[1]	217.7	218.0	218.7	218.5	219.5	221.0	220.1	220.0	220.3	218.4	220.1	221.5	219.5
1985[1]	222.7	224.5											

[1] Preliminary. *M1*—This measure is currency, travelers checks, plus demand deposits at commercial banks and interest-earning checkable deposits at all depository institutions. *Source: Federal Reserve System* T.327

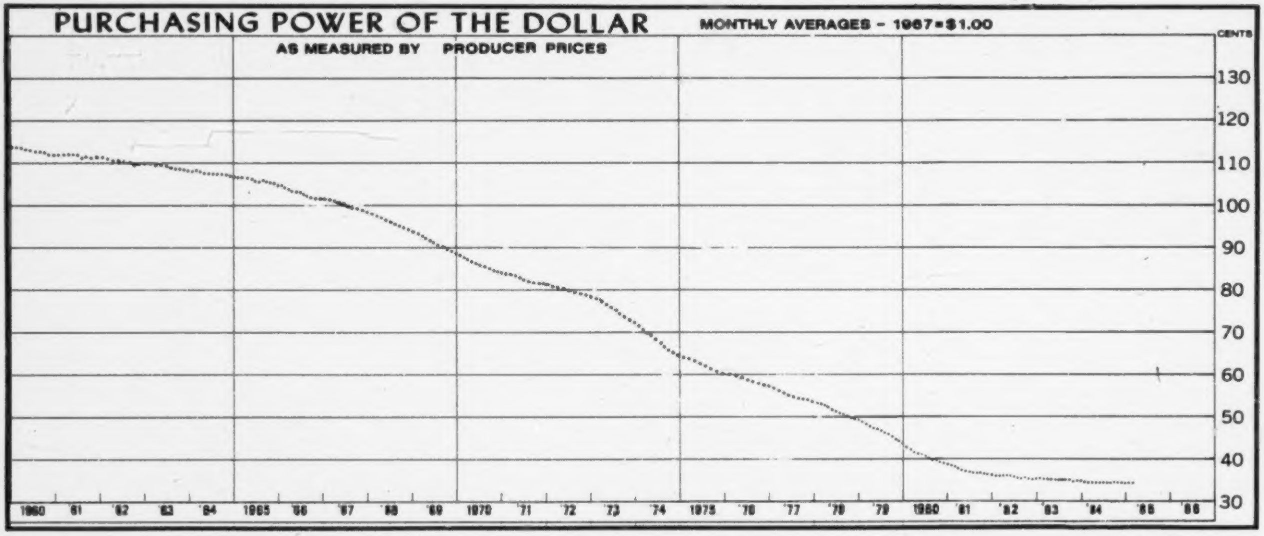
U.S. Money Supply M2 in 1972 $ In Billions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	774.0	784.7	790.1	796.8	803.7	803.6	805.1	811.2	815.6	822.6	828.5	835.4	805.9
1977	840.1	841.9	845.1	848.3	852.7	853.7	856.1	859.2	861.7	865.3	866.5	868.1	854.9
1978	686.6	867.6	867.2	867.0	865.4	863.2	862.1	863.0	863.1	862.0	862.4	861.7	864.4
1979	860.7	857.4	856.8	857.0	853.9	853.2	850.7	848.9	845.5	838.7	833.0	827.7	848.6
1980	818.6	815.6	808.9	799.3	798.2	800.1	810.1	814.6	812.0	808.8	807.7	800.0	812.3
1981	787.2	786.3	788.3	793.8	790.9	788.5	784.9	786.4	784.2	787.9	792.0	798.6	789.1
1982	802.7	803.0	807.5	810.4	809.2	805.4	806.3	812.8	819.3	822.9	830.1	841.1	814.2
1983	857.2	873.5	879.7	880.0	883.2	887.1	889.0	890.6	893.0	898.0	900.7	902.4	888.7
1984[1]	902.4	904.8	907.1	908.2	912.4	916.3	917.8	919.0	922.0	923.5	932.5	940.3	917.2
1985[1]	949.2	954.2											

[1] Preliminary. *M2*—This measure adds to M1 overnight repurchase agreements (RP's) issued by commercial banks and certain overnight Eurodollars (those issued by Caribbean branches of member banks) held by U.S. nonbank residents, general purpose and broker/dealer money market mutual fund shares (MMMF), and savings and small-denomination time deposits. *Source: Federal Reserve System* T.328



KEY INTEREST RATES



PURCHASING POWER OF THE DOLLAR

MONTHLY AVERAGES - 1967=$1.00

AS MEASURED BY PRODUCER PRICES

Year	Gross National Product					National Income					Personal Income				
	I	II	III	IV	Annual Total	I	II	III	IV	Annual Total	I	II	III	IV	Annual Total
1976	1,672	1,699	1,729	1,773	1,718	1,346	1,364	1,389	1,418	1,379	1,349	1,374	1,404	1,438	1,391
1977	1,835	1,895	1,954	1,989	1,918	1,471	1,528	1,585	1,618	1,551	1,476	1,514	1,558	1,604	1,538
1978	2,032	2,140	2,203	2,282	2,156	1,653	1,737	1,792	1,858	1,760	1,638	1,692	1,748	1,809	1,722
1979	2,336	2,378	2,455	2,503	2,418	1,907	1,941	1,994	2,025	1,967	1,872	1,917	1,982	2,034	1,951
1980	2,573	2,579	2,639	2,736	2,632	2,076	2,073	2,118	2,200	2,117	2,092	2,118	2,186	2,265	2,165
1981	2,876	2,918	3,009	3,028	2,958	2,299	2,331	2,408	2,418	2,364	2,343	2,390	2,478	2,507	2,429
1982	3,026	3,061	3,080	3,110	3,069	2,422	2,444	2,452	2,469	2,447	2,537	2,568	2,594	2,640	2,585
1983[2]	3,174	3,267	3,347	3,432	3,305	2,527	2,609	2,684	2,767	2,647	2,663	2,714	2,763	2,837	2,744
1984[2]	3,553	3,645	3,695	3,759	3,664	2,874	2,945	2,985	3,038	2,962	2,921	2,985	3,047	3,099	3,013
1985[3]															

[1] Seasonally adjusted at annual rates. [2] Preliminary. [3] Forecast. *Source: U.S. Dept. of Commerce* T.329

Iron and Steel

World mine production of iron ore in 1984 was nearly 8 percent above 1983 production of 729.6 million long tons, according to a preliminary U.S. Bureau of Mines estimate. The Soviet Union accounted for 31 percent of estimated production, followed by Brazil—13 percent; and Australia—11 percent, virtually the same percentages as in 1983. World iron ore trade increased in 1984, reflecting moderately increased demand for iron and steel in most major industralized countries. Ocean freight rates increased, but prices for most iron ores declined for the second consecutive year, owing to abundant ore supplies and the strong U.S. dollar.

Preliminary data for 1984 indicated that U.S. production of iron ore increased by 35 percent over the depressed 1983 output, reflecting improved demand for iron and steel and low stocks of ore. The Bureau of Mines estimated 1985 domestic production at 49 million tonnes, and apparent consumption at 65 million. From a 1981 base, demand for iron ore is expected to decline at an average annual rate of about 2 percent through 1990.

U.S. consumption of iron ore by the iron and steel industry in 1984 rose to 66 million tons, about 8 percent more than in 1983. However, the industry continued to face problems of overcapacity and declining markets, although productivity improved, according to the Bureau of Mines. Several mines and one pelletizing plant were closed permanently, and by the end of 1984, at least 5 of the 8 taconite operations in Minnesota were shut down for indefinite periods and several thousand employees were laid off. Unusually high imports of steel were credited with causing a reduction in demand for iron ore.

U.S. imports of iron ore for consumption rose 30 percent in 1984, with most of the increase accounted for by imports from Canada, followed by Brazil. Imports of ore usually account for between 25 percent and 35 percent of domestic demand. U.S. exports of iron ore (much smaller than imports) increased 32 percent in 1984. Stocks of iron ore at U.S. mines, receiving and transfer docks, and consuming plants on December 31, 1984 totaled 32.1 million long tons, only marginally lower than a year earlier.

U.S. production of pig iron in 1984 was nearly 7 percent above that of 1983, according to preliminary data of the U.S. Bureau of Mines. Consumption increased by nearly 6 percent, while ending stocks were off 9 percent from a year earlier.

Receipts of steel scrap from dealers and other sources increased some 12 percent in 1984 compared with 1983 receipts. Production of recirculated scrap increased some 8 percent. U.S. scrap consumption in 1984 was up 10 percent from a year earlier, and ending stocks were off 10 percent, according to preliminary data of the Bureau of Mines. It is estimated that in 1985, U.S. apparent consumption will be about 70 million tons. From a 1983 base, demand for ferrous scrap is expected to increase at an average annual rate of about 2.8 percent through 1990.

Monthly composite prices in dollars per long ton for No. 1 heavy melting steel scrap, which is regarded as the bellwether by the scrap industry, in 1984 ranged between a high of $96.25 in February and a low of $79.35 in December, according to *American Metal Market* data.

In 1984, the U.S. Trade Representative negotiated with some countries, including Brazil, the EEC, Japan, the Republic of Korea, and Spain for regulation of their exports to the U.S. In return for such voluntary restraints, the U.S. steel industry would be expected not to proceed with most antidumping or countervailing duty complaints against foreign steel producers.

World Production of Raw Steel (Ingots & Castings) In Millions of Short Tons

Year	Belgium	Brazil	Canada	Czechoslovakia	China	France	Italy	Japan	Luxembourg	Poland	Spain	Sweden	United Kingdom	United States	USSR	W. Germany	World Total
1978	13.9	13.3	16.4	16.9	35.0	25.2	26.8	112.6	5.3	21.2	12.4	4.8	22.4	137.0	166.9	45.5	787.9
1979	14.9	15.3	17.7	16.3	38.0	25.8	26.7	123.2	5.5	21.2	13.6	5.1	23.6	136.3	164.4	50.8	821.1
1980	13.6	16.9	17.5	16.8	40.9	25.5	29.2	122.8	5.1	21.5	13.9	4.7	12.4	111.8	163.1	48.3	786.8
1981	13.5	14.6	16.3	16.8	39.2	23.4	27.3	112.1	4.2	17.3	14.2	4.2	17.2	120.8	163.6	45.9	776.9
1982[1]	10.9	14.3	13.0	16.5	41.0	20.3	26.4	109.7	3.9	16.3	14.5	4.3	15.1	74.6	162.2	39.6	707.1
1983[1]	11.2	16.2	14.1	16.6	44.0	19.4	23.9	107.1	3.6	15.0	14.0	4.6	16.5	84.6	168.7	39.4	724.5
1984[2]					46.0			116.0						93.0	169.0		770.0

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.330

Average Wholesale Prices of Iron and Steel in the U.S. In Dollars Per Net Ton

	Pig Iron				No. 1 Heavy Melting Steel Scrap		Cents Per Pound at Pittsburgh								
									Steel Bars						
Year	Bessemer Neville Isl., Pa.	Iron Age Composite	No. 2 F.O.B. Birmingham	Steel Billets Pitts.	Pitts.	Chicago	Tin Plate (¼ Lb.)	Hot Rolled Sheet[2]	Hot Rolled	Cold Finished	Structural Shapes	Carbon Steel Plates	Cold Rolled Strip	Galvanized Sheets	Wire Rods-Chi. $Gr. Ton
1978	190.00	198.31	191.00	282.88	78.48	73.98	18.0–20.4	15.36	14.01	22.80	15.73	16.53	22.49	20.21	16.80
1979	190.00	203.00	191.00	302.00	100.77	96.69	19.1–23.4	17.05	16.20	25.07	17.36	18.46	24.13	22.40	17.22
1980	200.83	203.00	191.00	348.70	95.48	86.70	23.3–24.9	18.21	19.59	28.95	18.98	20.57	27.15	23.56	19.09
1981	209.67	204.66	205.33	358.00	100.57	91.76	24.9–26.7	20.13	16.95	29.45	21.32	23.04	30.23	26.05	20.27
1982	213.00	213.00	213.00	358.00	66.47	57.78	26.3–27.9	20.80	17.23	31.06	22.90	24.25	29.75	26.90	20.48
1983[1]	213.00	213.00	213.00	358.00	76.99	72.42	29.33	22.16	20.25	28.50	22.90	25.45	33.45	28.23	20.48
1984[3]					92.71	83.12									

[1] Preliminary. [2] 10 gauge. [3] Estimate. *Source: American Metal Market* T.337

IRON AND STEEL

Salient Statistics of Steel in the United States In Millions of Short Tons

Year	Value of Exports (Million $)	Value of Imports (Million $)	Production: Steel Ingots and Castings: Basic Oxygen	Open Hearth Acid	Open Hearth Basic	Bessemer	Electric[3]	Total Production	Alloy Steel[2]: Stainless	Alloy Steel: Other	Alloy Steel: Total Production	Shipments of Steel Products: Domestic Consumption	Shipments: Export
1976	2,462	4,584	79.9	[5]	23.5	[5]	24.6	128.0	1.7	14.3	16.0	86.4	3.0
1977	2,284	5,936	77.4	[5]	20.0	[5]	27.9	125.3	1.9	15.3	17.2	88.0	3.1
1978	2,285	7,658	83.5	[5]	21.3	[5]	32.2	137.0	2.0	18.2	20.2	94.6	3.3
1979	2,804	7,823	83.3	[5]	19.2	[5]	33.9	136.3	2.1	18.0	20.1	98.3	2.0
1980	3,728	7,792	67.6	[5]	13.1	[5]	31.2	111.8	1.7	15.4	17.1	83.9	2.6
1981	3,649	11,286	73.2	[5]	13.5	[5]	33.2	119.9	1.7	17.6	19.3	88.4	1.8
1982	2,734	10,394	45.3	[5]	6.1	[5]	21.5	74.6	1.2	9.2	10.4	61.6	.8
1983[1]	1,783	7,238	52.0	[5]	6.0	[5]	26.6	84.6	1.8	9.1	10.9	67.6	.5
1984[4]			52.8	[5]	8.3	[5]	31.4	92.5	1.8	10.8	12.6	73.0	.4

[1] Preliminary. [2] Included under total steel production. [3] Includes crucible steels. [4] Estimate. [5] No longer published. *Sources: American Iron & Steel Institute; U.S. Bureau of Mines*

T.331

U.S. Production of Steel Ingots, Rate of Capability Utilization[1] In Percent

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	66.8	72.1	81.2	83.3	88.6	84.9	76.7	77.2	77.2	77.7	75.0	74.7	78.4
1978	77.2	80.1	83.1	88.5	91.5	91.1	85.1	86.3	88.6	89.8	89.4	87.7	86.8
1979	83.5	87.9	94.5	93.4	94.8	93.7	89.9	86.0	82.8	84.4	80.6	78.0	87.8
1980	82.7	85.3	88.4	83.0	69.6	58.4	53.1	54.4	62.6	72.2	79.5	77.8	72.8
1981	79.9	83.7	88.6	87.7	86.2	81.5	77.6	77.3	75.9	68.7	62.8	58.6	78.3
1982	59.3	60.9	61.7	55.2	50.9	47.7	43.8	42.4	41.9	40.2	35.9	34.0	48.4
1983[2]	43.4	49.0	55.5	58.9	57.9	56.5	54.3	55.1	57.8	60.2	58.7	54.7	55.4
1984[2]	69.6	76.0	79.1	80.8	79.8	71.4	65.3	60.5	57.7	58.4	57.8	52.4	67.4
1985[2]	60.9												

[1] Based on tonnage capability to produce raw steel for a full order book. [2] Preliminary. *Source: American Iron and Steel Institute*

T.332

United States Production of Steel Ingots In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	9,835	9,907	11,294	11,439	12,136	11,605	11,400	11,128	10,463	10,295	9,494	9,215	128,000
1977	9,089	8,859	11,049	11,167	12,201	11,384	10,319	10,393	10,050	10,442	9,748	10,031	125,333
1978	10,301	9,643	11,083	11,528	12,320	11,861	11,388	11,550	11,467	12,105	11,654	11,812	137,031
1979	11,105	10,562	12,576	12,196	12,789	12,230	11,821	11,309	10,541	10,810	9,997	9,996	136,341
1980	10,701	10,332	11,439	10,658	9,226	7,501	6,796	7,018	7,767	9,442	10,057	10,180	111,835
1981	10,590	10,028	11,744	11,243	11,423	10,451	10,160	10,120	9,618	9,003	7,962	7,672	120,828
1982	7,737	7,178	8,049	7,006	6,678	6,050	5,719	5,538	5,299	5,262	4,546	4,456	74,577
1983	5,570	5,676	7,127	7,292	7,412	6,993	6,921	7,020	7,134	7,692	7,263	6,991	83,379
1984[1]	7,970	8,142	9,056	8,997	9,174	7,945	7,460	6,915	6,378	6,703	6,422	6,013	91,175
1985[1]	6,984												

[1] Preliminary. *Source: American Iron and Steel Institute*

T.333

Shipments of Steel Products[1] by Market Classifications in the United States In Thousands of Net Tons

Year	Appliances, Utensils & Cutlery	Automotive	Containers & Packaging	Construction	Contractors Products	Electrical Mach. & Equipment	Export	Machinery, Industrial Equip. & Tools	Oil and Gas	Rail Transportation	Steel for Converting & Processing[2]	Steel Service Center & Distributors	All Other[3]	Total Shipments
1976	1,961	21,334	6,914	7,406	4,543	2,670	1,838	5,188	2,652	3,027	4,141	14,662	13,111	89,447
1977	2,129	21,490	6,714	7,553	4,500	2,639	1,076	5,566	3,650	3,238	3,679	15,346	13,567	91,147
1978	2,094	21,253	6,595	9,612	3,480	2,811	1,224	5,992	4,140	3,549	4,612	17,333	15,240	97,935
1979	2,141	18,624	6,770	10,058	4,021	2,821	2,010	6,027	3,738	4,127	4,728	18,263	16,934	100,262
1980	1,726	12,156	5,549	12,149	3,362	2,441	2,597	4,566	5,368	3,178	3,881	16,174	10,706	83,853
1981	1,775	13,154	5,292	8,446	3,230	2,600	1,844	4,624	6,238	2,162	3,338	17,637	16,672	87,014
1982	1,337	9,288	4,470	6,283	2,287	2,003	832	2,584	2,745	1,020	3,222	13,067	12,429	61,567
1983	1,618	12,320	4,532	7,271	2,703	2,335	544	2,486	1,296	937	1,211	16,710	13,621	67,584
1984	1,635	12,554	4,337	8,614	2,563	2,363	428	2,737	1,727	1,036	4,686	17,234	13,098	73,012

[1] All grades including carbon, alloy & stainless steel. [2] Net total after deducting shipments to reporting companies for conversion or resale. [3] Includes agricultural; bolts, nuts, rivets & screws; forgings (other than automotive); shipbuilding & marine equipment; aircraft; mining, quarrying & lumbering; other domestic & commercial equipment machinery; ordnance & other direct military; & shipments of non-reporting companies. *Source: American Iron and Steel Institute*

T.334

Net Shipments of Steel Products in the United States
(All Grades, Including Carbon, Alloy & Stainless Steel) In Thousands of Net Tons

Year	Cold Finished Bars	Rails & Accessories	Wire & Wire Products	Tin Mill Products	Plates	Sheets & Strip	Hot Rolled Bars	Pipe & Tubing	Shapes & Steel Piling	Reinforcing Bars	Hot Rolled Sheets	Cold Rolled Sheets	Semi-Finished	Alloy	Stainless
1979	2,245	2,026	2,449	6,310	9,035	43,507	8,493	8,242	5,596	5,303	15,995	17,284	5,496	11,023	1,361
1980	1,585	1,797	1,768	5,709	8,080	33,853	5,961	9,097	5,207	4,683	12,116	13,313	5,342	9,368	1,127
1981	1,620	1,458	1,694	4,927	7,397	36,924	6,628	10,286	4,903	4,371	13,451	14,396	5,598	10,595	1,163
1982	1,015	782	1,308	4,321	4,146	7,730[2]	4,757	5,026	3,563	4,049	9,052	11,132	3,693	6,726	894
1983	1,179	884	1,359	4,308	3,816	5,793[2]	5,129	3,242	3,622	4,275	11,619	13,781	3,861	6,154	1,137
1984[1]	1,158	1,239	1,222	4,062	4,342	8,357[2]	5,791	4,276	3,983	4,315	13,133	13,664	4,314	7,448	1,248

[1] Preliminary. [2] Excludes Hot & Cold rolled sheets & strips. Shown elsewhere. *Source: American Iron & Steel Institute* T.335

U.S. Foreign Trade of Iron & Steel Products In Thousands of Short Tons

	U.S. Imports of Iron & Steel Pdts.						Exports of Iron & Steel Pdts. from U.S.					
				Grand Total						Grand Total		
Year	Steel Mill Pdts.	Other Steel Pdts.	Iron Pdts. & Ferro-alloys	Quantity	Mil. $	Iron & Steel Scrap	Steel Mill Pdts.	Other Steel Pdts.	Iron Pdts. & Ferro-alloys	Quantity	Mil. $	Iron & Steel Scrap
1979	17,518	787	123	18,428	7,823	760	2,818	374	208	3,400	2,804	11,054
1980	15,495	753	107	16,355	7,792	582	4,101	407	221	4,729	3,728	11,168
1981	19,898	822	97	20,818	11,286	556	2,904	444	209	3,557	3,649	6,415
1982	16,536	745	104	17,385	10,394	474	1,842	342	183	2,367	2,734	6,804
1983[1]	17,034	804	125	17,964	7,238	641	1,199	247	144	1,589	1,783	7,520
1984[2]				26,500		600				1,400		8,200

[1] Preliminary. [2] Estimate. *Source: U.S. Bureau of Mines; American Metal Market* T.336

World Production of Pig Iron (Excludes Ferro-Alloys) In Millions of Short Tons

Year	Australia	Belgium	Canada	Czech.	France	W. Germany	India	Italy	Japan	Luxembourg	Poland	China	USSR	Un. Kingdom	United States	World Total
1979	8.6	11.9	12.0	10.5	20.9	38.8	9.6	12.5	92.4	4.2	12.7	40.5	120.2	14.2	87.0	586.3
1980	7.7	11.6	12.0	10.8	20.6	37.3	9.4	13.4	95.9	3.9	13.2	41.9	118.3	7.1	68.7	564.8
1981	7.5	10.7	10.7	10.4	18.7	35.1	10.4	13.5	88.2	3.2	10.3	37.7	118.8	10.4	73.8	551.9
1982[1]	6.6	8.6	8.8	10.0	16.6	30.4	10.6	12.7	85.6	2.9	9.4	39.2	117.6	9.2	43.3	502.4
1983[1]	5.6	8.8	9.4	9.9	14.8	29.3	10.5	11.4	79.8	2.6	9.4	41.2	121.8	10.5	48.8	505.0
1984[2]									90			43	122		53	544

[1] Preliminary. [2] Estimated. *Source: Bureau of Mines* T.338

U.S. Pig Iron Production (Excluding Production of Ferro-Alloys) In Thousands of Short Tons

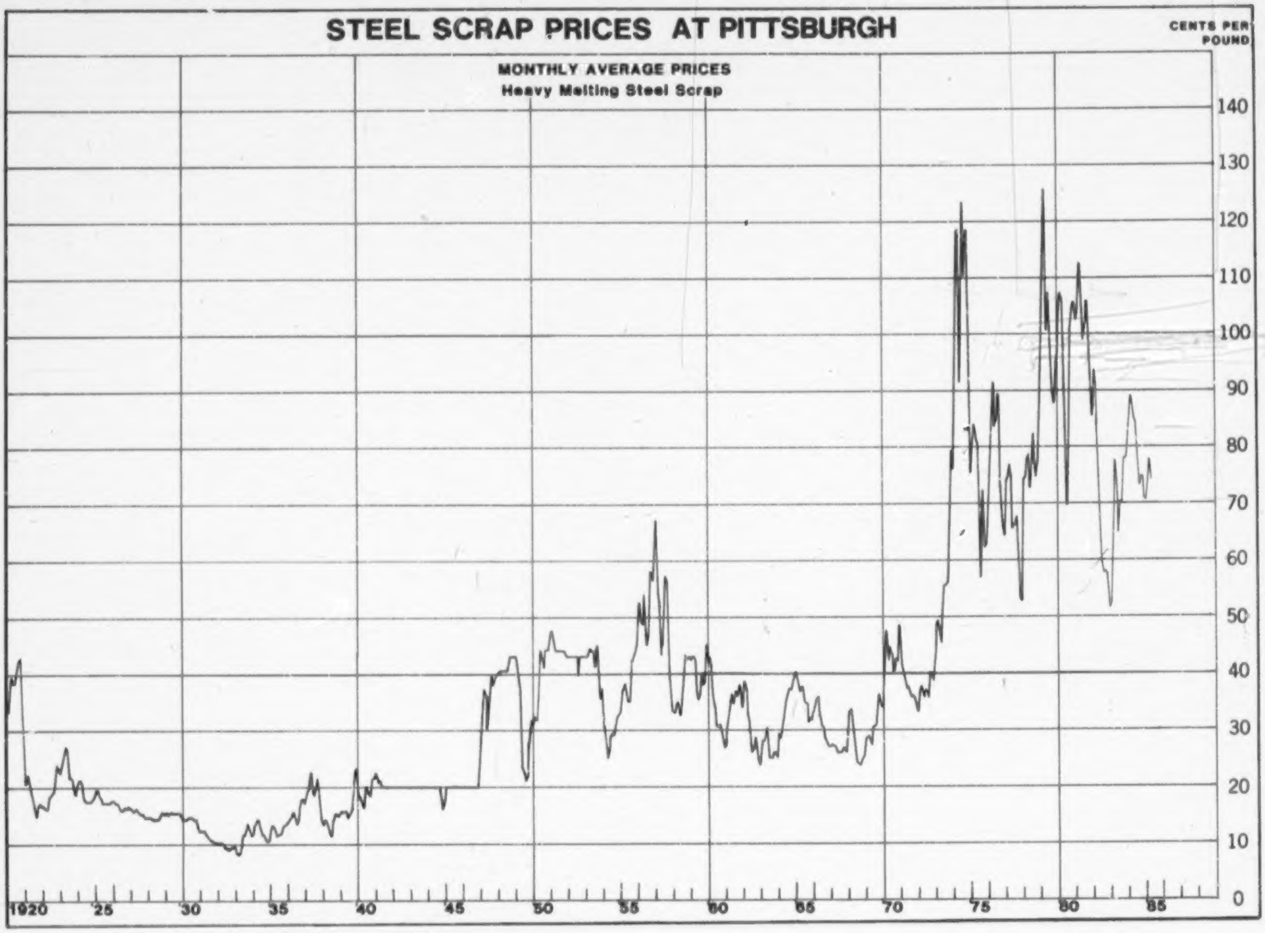
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1980	6,583	6,357	7,115	6,677	5,906	4,664	4,222	4,360	4,596	5,621	6,132	6,489	68,721
1981	6,603	6,108	7,193	6,755	6,938	6,408	6,268	6,259	5,889	5,419	4,782	4,750	73,570
1982	4,489	4,169	4,622	3,967	3,904	3,595	3,516	3,277	3,160	3,077	2,648	2,712	43,136
1983[1]	3,192	3,264	4,206	4,333	4,376	4,060	4,213	4,245	4,159	4,317	4,119	4,084	48,741
1984[1]	4,310	4,497	5,083	5,077	5,166	4,565	4,329	4,057	3,473	3,739	3,817	3,694	47,497
1985[1]	3,969												

[1] Preliminary. *Source: American Iron and Steel Institute* T.341

Salient Statistics of Ferrous Scrap & Pig Iron in the U.S. In Millions of Short Tons

	Consumption: Ferrous Scrap & Pig Iron Charged To												Stocks—Dec. 31 Ferrous Scrap & Pig Iron at Consumers'		
	Mfg. of Pig Iron & Steel Ingots & Castings			Iron Foundries & Misc. Users				All Uses							
Year	Scrap	Pig Iron	Total	Scrap	Pig Iron	Total	Mfg. of Steel Castings (Scrap)	Ferr. Scrap	Pig Iron	Grand Total	Imports of Scrap[2]	Exports of Scrap[3]	Scrap	Pig Iron	Total Stocks
1979	77.2	84.7	161.9	18.5	2.7	21.2	3.2	98.9	87.5	186.4	.8	11.1	8.7	.9	9.6
1980	66.6	67.1	133.7	14.3	1.9	16.2	2.9	83.7	69.1	152.8	.6	11.2	8.0	.9	8.9
1981	68.3	73.0	143.6	14.2	2.0	16.2	2.6	85.1	75.0	162.1	.6	6.4	8.1	.9	9.0
1982	43.7	43.3	87.0	10.9	1.1	12.0	1.8	56.4	44.4	100.8	.5	6.8	6.4	.6	7.0
1983[1]	49.0	49.0	98.0	11.4	1.0	12.4	1.5	61.8	50.1	111.9	.6	7.5	5.8	.3	6.1
1984[4]								66.1	52.1	118.2	.6	9.5	5.6	.4	6.0

[1] Preliminary. [2] Including tinplate scrap. [3] Excluding tinplate circles, strips, cobbles, etc. [4] Estimate. *Source: Bureau of Mines* T.342



Consumption of Pig Iron in the U.S., by Type of Furnace or Equipment In Thousands of Net Tons

Year	Open Hearth	Elec-tric	Cup-ola	Basic Oxy. Consen.	Air & Other Furn.	Direct Casting	Total	Year	Open Hearth	Elec-tric	Cup-ola	Basic Oxy. Concen.	Air & Other Furn.	Direct Cast.	Total
1977	12,531	993	1,241	63,877	354	3,007	82,003	1981	8,867	583	685	62,162	254	2,489	75,040
1978	13,444	1,440	1,056	69,028	398	3,055	88,420	1982	3,635	496	481	38,553	141	1,102	44,409
1979	12,865	905	1,026	68,526	397	3,738	87,458	1983[1]	3,918	341	425	44,330	91	965	50,070
1980	8,606	855	698	56,414	299	2,182	69,053	1984[2]							53,000

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.340

Wholesale Price of No. 1 Heavy Melting Steel Scrap at Chicago In Dollars Per Gross Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver-age
1976	71.67	74.90	85.04	94.96	86.45	86.86	90.67	80.95	68.90	62.00	62.00	65.14	77.46
1977	69.00	69.00	69.65	70.79	64.62	58.36	57.00	57.00	55.00	49.00	43.95	59.26	60.21
1978	71.00	71.00	71.48	76.00	70.32	72.73	76.63	74.48	69.00	69.45	79.35	86.35	73.98
1979	93.00	103.00	121.73	110.10	91.91	106.62	98.62	89.96	86.00	86.22	91.00	91.28	96.69
1980	96.14	99.00	97.00	90.54	69.62	62.24	67.45	77.95	87.24	92.22	97.29	103.68	86.70
1981	95.00	91.11	105.14	107.55	97.50	88.00	88.45	97.76	92.52	82.64	75.00	74.41	91.76
1982	83.00	78.63	69.78	63.86	58.30	51.77	49.00	51.73	48.95	47.86	45.00	45.48	57.78
1983	56.14	67.00	77.70	70.33	65.00	70.52	70.08	74.00	78.00	78.00	78.30	84.00	72.42
1984	88.29	89.00	87.09	85.14	85.00	84.71	79.00	78.00	81.00	81.09	83.00	76.00	83.12
1985	78.86	82.16	84.76										

Source: American Metal Market T.339

World Production of Iron Ore[3], by Specified Countries (Gross Weight) In Millions of Long Tons

Year	Australia	South Africa	Brazil	Canada	Chile	China	France	W. Germany	India	Liberia	Spain	Sweden	United Kingdom	United States	USSR[1]	Venezuela	World Total[1]
1975	96.1		88.5	46.1	10.8	64.0	48.9	3.2	40.8	24.0	7.5	30.4	4.4	78.9	229.1	24.4	888.2
1976	91.8	15.4	92.6	54.7	9.9	59.1	44.5	2.2	43.2	20.2	8.1	29.4	4.5	80.0	237.3	18.4	885.1
1977	94.4	26.1	80.7	56.7	7.5	49.2	36.1	2.4	41.9	17.4	8.2	24.4	3.7	55.8	238.0	13.5	827.8
1978	81.8	23.1	83.6	41.1	6.7	68.9	32.9	1.6	38.2	17.7	8.4	21.1	4.2	81.6	242.5	13.3	833.3
1979	90.3	31.1	102.4	58.9	7.0	65.0	31.1	1.6	39.2	18.1	8.7	25.8	4.2	85.7	237.9	15.0	888.8
1980	94.0	25.9	112.9	48.0	8.1	67.0	28.5	1.9	41.3	17.9	9.1	26.8	.9	69.6	240.8	15.8	876.9
1981	83.3	27.9	96.3	51.2	7.6	65.0	21.3	1.6	40.7	19.4	8.4	22.9	.7	73.2	238.6	15.3	841.6
1982[2]	86.3	24.2	93.5	34.9	5.7	68.0	19.1	1.3	40.3	18.0	8.1	15.9	.5	35.4	240.6	11.0	769.1
1983[2]	72.8	16.3	87.6	33.0	5.9	70.0	15.7	1.0	38.2	14.7	7.3	13.0	.4	37.6	241.1	9.6	729.6
1984[1]	84	21	100	36		71	15		40	15		15		51	242	12	785

[1] Estimate. [2] Preliminary. [3] Iron ore, iron ore concentrates and iron ore agglomerates. *Source: Bureau of Mines* T.344

Salient Statistics of Iron Ore[2] in the U.S. In Millions of Long Tons

		Production[3]								Stocks—Dec. 31						
Year	Net Import Reliance % of Apparent Consumption	Total[3]	Lake Superior	Northeast	Southeast	West	Shipments[4]	Value Mill. $ (at Mine)	Avg. Value $ at Mine Per Ton	Mines	Consuming Plants	Lake Erie Docks	Imports	Exports	Consumption	Manganiferous Shipments[5]
1975	30	78.9	66.7	1.9	.1	9.6	75.7	1,620.6	21.41	12.3	52.2	4.6	46.7	2.5	114.1	.1
1976	31	80.0	67.4	2.0	.1	9.7	77.1	1,871.1	24.28	14.0	56.2	4.8	44.4	2.9	125.4	.2
1977	48	55.8	44.1	1.2	.1	9.3	54.1	1,422.7	26.32	14.8	42.3	3.0	37.9	2.1	116.0	.2
1978	29	81.6	72.7	8.9			83.2	2,401.4	28.86	12.4	39.3	3.6	33.6	4.2	124.8	.3
1979	25	85.7	77.2	8.6			86.2	2,814.4	32.64	11.3	39.0	5.4	33.8	5.1	125.4	.2
1980	25	69.6	62.3	7.3			69.6	2,544.1	36.56	11.7	35.7	6.1	25.1	5.7	98.9	.2
1981	22	73.2	67.5	5.7			72.2	2,915.2	40.39	12.7	36.2	6.6	28.3	5.5	104.4	.2
1982	34	35.4	31.8	3.6			35.8	1,491.8	41.72	12.1	29.9	5.8	14.5	3.2	63.9	—
1983[1]	37	37.6	35.6	2.0			44.6	1,945	43.61	3.9[7]	25.5	3.2	13.2	3.8	70.6	—
1984[6]	19	51.3	49.8	1.5			50.2			5.2	24.0	2.9	17.2	5.0	75	

[1] Preliminary. [2] Usable; less than 5% Mn. [3] Includes by-product ore. [4] Excludes by-product ore. [5] Iron ore; 5 to 35% Mn. [6] Estimate. [7] New classification. *Source: Bureau of Mines* T.345

U.S. Imports (for Consumption) of Iron Ore from Principal Countries In Thous. of Long Tons

Year	India	Venezuela	Australia	Brazil	Canada	Chile	South Africa	USSR	Liberia	Sweden	Peru	Norway	Total
1975	164	13,137	803	7,526	19,111	931	128	265	2,496	182	1,551	53	46,743
1976	130	9,001	617	5,388	24,962	608	162	44	2,153	441	716	151	44,390
1977	—	6,179	305	2,243	25,283	566	249	86	1,792	153	1,020	—	37,905
1978	—	6,083	264	3,979	19,236	390	94	—	2,170	256	818	302	33,616
1979	54	4,563	183	3,095	22,602	245	106	—	2,190	171	456	44	33,776
1980	—	3,602	—	1,995	17,311	322	6	—	1,590	33	193	—	25,058
1981	—	5,071	—	1,738	18,845	342	—	—	2,160	87	77	—	28,328
1982	—	1,643	—	972	9,281	47	52	—	2,399	71	35	—	14,501
1983[1]		1,333		1,276	8,832				1,732	68	—		13,246
1984[2]		1,588		2,542	11,161				1,745	84	7		17,160

[1] Preliminary. [2] Estimate. *Source: Department of Commerce* T.346

Total[1] Iron Ore Stocks at End of Month in the U.S. In Millions of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1975	56.6	54.9	52.9	52.3	56.7	57.6	61.2	63.9	66.1	66.6	67.3	68.1
1976	66.9	65.4	63.1	61.4	62.6	64.1	65.3	66.6	69.3	71.4	73.2	75.0
1977	73.5	72.2	70.1	68.5	67.7	68.5	69.7	67.2	65.9	63.5	60.7	59.4
1978	56.3	54.1	53.1	50.4	49.9	51.9	51.6	53.8	54.7	55.5	56.4	55.3
1979	53.0	50.7	47.8	46.7	46.6	48.0	51.0	51.5	52.0	54.2	55.2	55.8
1980	53.7	51.8	49.0	49.6	50.7	53.5	56.8	57.5	58.0	57.7	56.6	56.1
1981	54.5	53.2	50.8	49.8	51.4	53.7	56.4	58.8	59.6	60.4	60.1	60.2
1982	60.4	60.9	57.3	57.7	57.6	58.5	59.1	57.8	55.8	54.5	52.6	52.6
1983[2]	45.5	42.6	39.6	37.5	37.2	37.4	37.0	35.3	35.7	34.7	33.8	32.6
1984[2]	30.1	28.4	26.3	26.2	27.4	29.2	30.9	31.6	32.2	33.3	33.7	

[1] All stocks at mines, furnace yards and at U.S. docks. [2] Preliminary. *Source: American Iron Ore Association* T.347

Lard

World pork production was expected to reach a new record during the 1984/85 season in spite of pork production cutbacks estimated for the U.S. and EC countries. However, according to *Oil World*, the increase in world pork production would be only marginal, or about 200,000 tonnes in 1984/85 compared with 0.9 million in 1983/84 and 1.3 million in 1982/83.

During the last half of 1984, the premium of both palm oil prices and soybean oil prices over lard were narrowed sharply even though worldwide supplies of vegetable oils were generally tight. World disappearance of lard during October–September 1983/84 rose sharply by 3 percent over the previous season to a record 5.16 million tonnes. Tight vegetable oil stocks evidently increased the demand for lard as a cheaper substitute. But further increases in world lard disappearance were considered unlikely during the 1984/85 season because of reduced production until the April–June quarter of 1985. Prospects were deemed slightly better for increases in lard disappearance in the Soviet Union, East Europe, and China. Also, world exports of lard were expected to be larger in 1984/85 due to increased shipments of lard from the Soviet Union. West European exports (due mostly to shipments from EC countries) were expected in increase only slightly, and U.S. lard exports were forecast as declining somewhat from 1983/84.

During October–August 1983/84, U.S. domestic use of lard in manufactured foods stayed well ahead of the 1982/83 level because of the substitution of lard for expensive vegetable oils, according to the USDA. Lard consumption in edible uses totaled 295 million pounds in 1983/84, 18 percent over the 1982/83 level. Direct use in the same period totaled 504 million vs. 447 million for the same period in the previous season. U.S. lard exports were estimated at 75 million pounds during 1983/84 and exports for 1984/85 were projected at 55 million pounds. The drop in U.S. lard exports was expected to be influenced by the unusually strong U.S. dollar and by growing supplies of vegetable oil abroad. Also, during 1983/84, a 6 percent decrease in the use of edible tallow suggested a substitution of lower priced lard for tallow in commercial markets.

Supply and Distribution of Lard in the United States In Millions of Pounds

	Supply							Distribution								
	Production										Domestic Disappearance					
	Commercial											Direct Use as Lard				
Year	Federally Inspected	Other	Total	Farm	Total Production	Stocks Jan. 1[2]	Total Supply	Exports[3]	Shipments to U.S. Territories	Total Disappearance	Shortening	Margarine	Civilian	Military	Per Capita Lbs.
1981	1,159		1,159		1,159	49	1,208	—183—		1,205	315	85	573	1	2.5
1982	1,011	—	1,011	—	1,011	37	1,048	—132—		1,040	251	28	586	1	2.5
1983[1]					973	37	1,010	—127—		913	277	30	424	1	1.8
1984[4]					939	34	973				280	35			

[1] Preliminary. [2] Factory & warehouse. [3] Includes military shipments for civilian relief abroad. Also non-food products; the bulk goes into shortening. [4] Estimate. *Source: Economic Research Service, U.S.D.A.* T.348

Lard Exports[2] of the United States by Selected Country of Destination In Thousands of Metric Tons

Year	Asia	Belgium & Lux.	Canada	Belize	Bolivia	Neth. Antilles	Colombia	W. Germany	Haiti	Mexico	Ecuador	Netherlands	Poland	United Kingdom	Yugoslavia	Grand Total
1981	.1	—	9.0	1.8	2.1	.4	1.0	—	1.1	32.6	—	—	17.0	.6	—	67.9
1982[1]	1.1	1.0	11.4	1.4	0	.6	.1	—	2.1	24.6	—	—	0	.6	—	46.7
1983																

[1] Preliminary. [2] Excludes exports for civilian relief & shipments by CARE. *Source: Foreign Agricultural Service, U.S.D.A.* T.352

United States Commercial[1] Production of Lard In Millions of Pounds

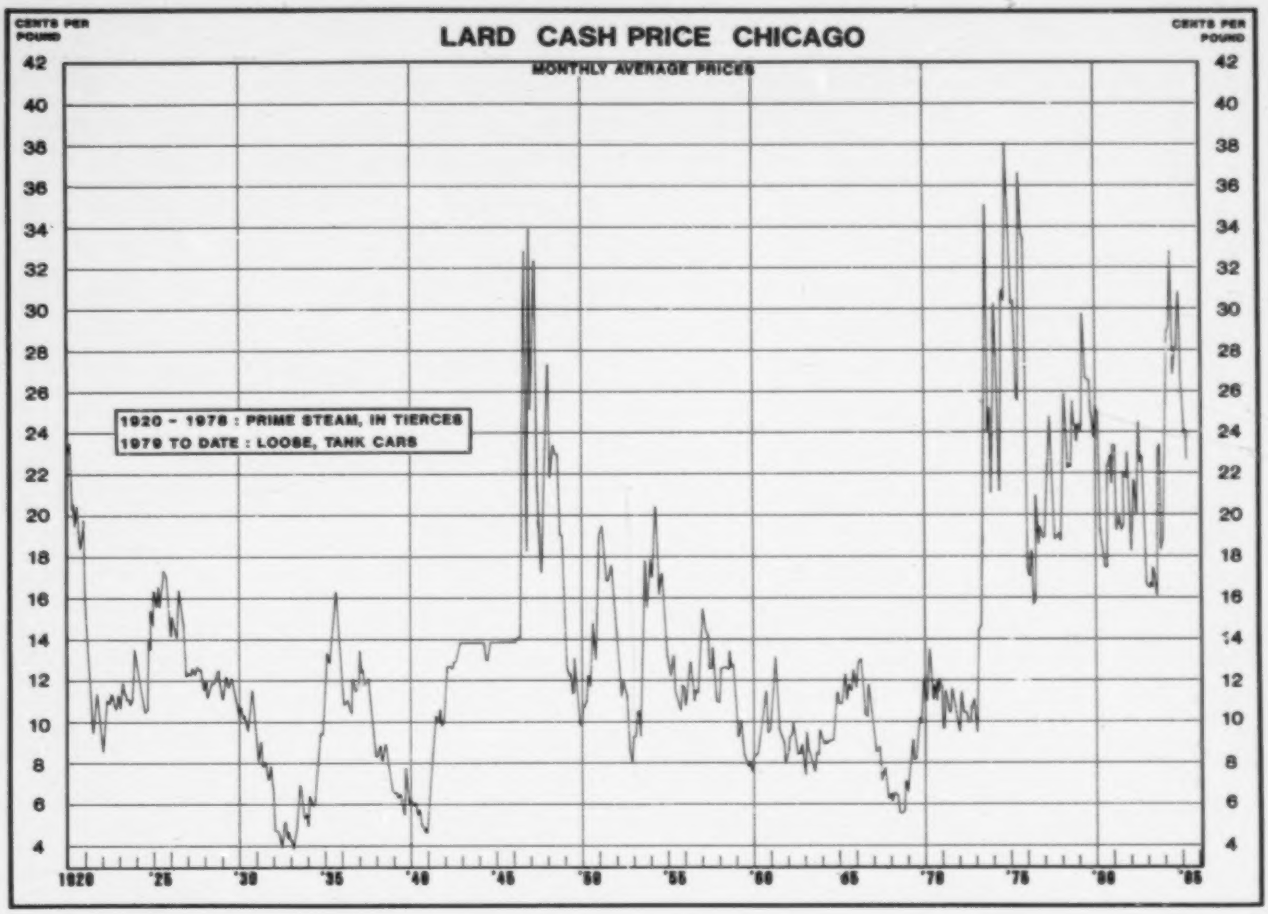
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1981	100.0	87.0	99.0	104.0	95.0	91.0	89.0	86.0	96.0	104.0	99.0	104.0	1,155
1982	88.0	77.0	94.0			257.0			234.0			261.0	1,011
1983	73.0	66.0	84.0	81.0	79.0	79.0	73.0	81.0	84.0	90.0	94.0	88.0	973
1984[2]	79.0	74.0	86.0	79.0	81.0	72.0	66.0	76.0	74.0	90.0	84.0	78.0	939
1985[2]	81.0	70.0											

[1] Includes "Rendered Pork Fat." [2] Preliminary. *Source: Department of Agriculture* T.354

Consumption (edible & inedible) of Lard in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1981	45.5	39.1	36.8	38.4	34.2	36.6	33.2	35.3	38.8	31.1	37.8	41.5	448
1982	35.3	25.4	28.6	33.4	31.2	28.1	24.2	22.2	22.4	21.6	23.3	26.3	322
1983	25.4	27.2	29.3	32.2	41.9	37.1	30.1	34.4	31.7	33.8	38.9	38.3	400
1984[1]	33.9	27.6	30.5	29.3	33.4	26.0	25.8	26.2	23.1	31.1	37.5	30.5	355
1985[1]	34.1	29.6											

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.349



Average Wholesale Price of Lard—Loose, Tank Cars, Chicago In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	19.4	20.8	23.8	25.6	22.0	22.5	23.3	22.3	26.0	24.5	24.5	23.3	23.2
1979	24.5	24.0	25.1	29.8	26.8	—	—	—	26.6	25.1	23.8	25.1	25.6
1980	22.0	21.6	19.3	19.0	18.0	17.5	17.5	22.5	23.0	21.6	23.3	23.3	20.7
1981	20.0	19.0	19.6	19.9	19.4	19.6	22.0	21.8	22.8	21.5	21.0	18.4	20.3
1982	20.0	21.5	20.0	22.0	23.0	24.6	22.6	22.8	21.3	21.0	17.3	16.5	21.1
1983	16.4	16.7	16.4	17.4	17.1	16.4	16.1	23.2	23.4	18.3	18.7	18.8	18.2
1984	25.9	26.3	28.9	29.1	32.8	29.5	26.8	28.1	28.2	30.5	30.8	26.4	28.6
1985	24.6	24.0	24.1										

Source: Economic Research Service, U.S.D.A. T.350

United States Cold Storage Holdings of all Lard[1], on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	28.5	30.0	29.7	33.9	35.7	35.4	36.8	32.4	29.7	35.1	29.5	32.0
1979	38.1	40.5	39.6	35.8	42.8	47.9	46.0	51.4	46.4	43.9	44.7	52.0
1980	49.9	54.4	61.3	62.5	57.9	51.7	59.1	57.1	55.0	43.5	44.6	48.7
1981	49.4	50.4	46.9	42.2	40.5	40.1	40.7	42.6	39.5	35.6	36.7	39.1
1982	37.0	35.3	32.5	34.0	32.7	31.8	31.4	25.5	32.2	24.2	29.5	39.0
1983	37.5	38.3	31.5	36.1	39.1	43.0	41.8	41.0	35.6	40.4	41.4	45.8
1984[2]	34.2	34.1	28.5	29.1	31.2	38.1	34.4	32.9	33.1	29.9	37.8	33.1
1985[2]	38.7	33.7	35.6									

[1] Stocks in factories & warehouses (except that in hands of retailers). [2] Preliminary. *Source: Bureau of the Census* T.351

Lead

World mine production of lead in 1984 was about 3 percent below 1983 output, according to preliminary U.S. Bureau of Mines data. U.S. lead mine and primary refinery production dropped 28 percent and 23 percent, respectively, to the lowest levels since 1967. These reductions primarily reflected 9-month and 7-month strikes at the nation's two largest primary lead producers. However, total secondary refinery production was estimated to have been up about 9 percent from the 1983 level. Shortages of scrap at acceptable prices were a problem during part of the year, at least.

U.S. imports of lead (refined metal) were 6 percent lower in 1984 than in the previous year, but imports of ore and concentrates increased 45 percent with the largest gains scored by Canada and Australia. However, Peru remained the most important supplier of ore, matte, etc.

Total U.S. lead consumption in 1984 was estimated to have decreased about 3 percent from that of 1983. Reported consumption, however, was 25 percent below the 1983 level. Reported use in storage batteries (the single most important use of lead) was off 25 percent. Near-record pig lead purchases by the major battery manufacturers in the last quarter of 1983, which were then converted into battery grids and oxide inventories, resulted in reduced metal purchases in 1984. The Bureau of Mines estimates 1985 U.S. consumption of lead at 1.0 million tonnes. From a 1983 base, demand for lead is expected to increase at an average annual rate of about 1.3 percent through 1990. The growth in lead use is contingent upon the development of cost-competitive and reliable electric vehicles for general and new industrial uses. An adverse factor for lead use in gasoline additives (which accounted for about 79,000 tonnes in 1984) was the EPA announcement that the permissible amount of lead in gasoline would be reduced by over 50 percent on July 1, 1985, and by over 90 percent on January 1, 1988.

Stocks of lead held by domestic primary refineries at the end of December 1984 were 18 percent below the year-earlier level, and stocks held by secondary smelters and consumers were off 32 percent.

The average U.S. producer price for common lead in 1984 was 25.55 cents per pound, 18 percent above the 1983 average. The year's high (monthly average) was 30.51 cents in July and the low 21.89 cents in December. The average spread of about 5.43 cents per pound for the U.S. producer price over the LME price (in cents per lb.) encouraged domestic consumer imports of the metal.

Futures Market

Lead futures are traded on the London Metal Exchange (LME).

World Smelter (Primary & Secondary) Production of Lead In Thousands of Metric Tons

Year	Australia[3]	Belgium[4]	Bulgaria	Canada[2]	China[2]	France	W. Germany	Japan	Mexico[3]	Peru[3]	Spain	United States	United Kingdom[3]	USSR	Yugoslavia[3]	World Total
1976	342.6	91.7	112.0	231.0	140.0	191.5	278.3	305.7	234.7	74.1	101.7	1,251		600.0	140.3	4,990
1977	337.9	73.6	120.0	240.6	150.0	144.4	373.5	305.2	216.2	79.2	118.6	1,306		610.0	145.0	5,140
1978	356.0	76.5	120.0	245.9	160.0	151.4	305.0	293.9	215.4	74.3	122.2	1,337	253.4	620.0	140.4	5,133
1979	427.1	60.7	119.0	252.4	170.0	159.9	316.6	294.3	223.0	90.7	127.0	1,380	276.5	690.0	133.6	5,628
1980	393.3	83.9	119.0	234.6	175.0	162.5	301.4	315.6	189.0	84.9	120.7	1,224	241.4	700.0	124.7	5,370
1981	400.8	88.2	119.0	238.2	175.0	167.5	362.3	332.3	194.7	84.2	117.2	1,139	224.5	715.0	120.5	5,345
1982[1]	417.1	80.9	119.0	238.9	175.0	163.4	350.4	311.9	171.4	82.0	131.6	1,088	213.3	730.0	109.0	5,255
1983[1]	384.7	81	119.0	242.0	175.0	152.6	349.2	364.0	175.0	72.7	130.0	1,018	226.0	745.0	110.0	5,234
1984[2]	375			255					180	70		950			100	5,200

[1] Preliminary. [2] Estimated. [3] Refined & bullion. [4] Includes scrap. *Source: Bureau of Mines* T.355

Consumption of Lead in the United States by Products In Thousands of Metric Tons

Year	Ammunition	Bearing Metals	Building[2] & Sheet Lead	Cable Covering	Calking Lead	Casting Metals	Glass & Ceramic Products	Paints	Solder	Storage Battery		Chemicals Petrol. Refin.[4]	Type-Metal	Brass and Bronze	Total Consumption
										Grids, Post, etc.	Oxides				
1978	55.8	9.5	23.1	13.9	9.9	3.6	—91.6—		68.4	412.6	466.7	178.3	10.8	16.5	1,432.7
1979	53.2	9.6	27.6	16.4	8.0	22.7	48.8	26.7	54.3	375.6	438.8	186.9	10.0	18.7	1,358.3
1980	48.7	7.8	28.4	13.4	5.7	19.0	45.4	20.7	41.4	302.2	343.1	127.9	9.0	14.0	1,070.3
1981	49.5	6.9	28.2	12.1	5.5	18.6	44.3	16.3	29.7	342.2	428.0	111.4	7.8	13.3	1,167.1
1982	44.2	6.1	23.8	15.2	4.1	25.1	34.5	13.4	28.5	312.6	391.7	119.2	2.8	11.4	1,075.4
1983[1]	43.7	5.8	27.3	10.5	3.6	16.2	39.7	15.4	28.5	382.3	424.6	89.1	2.5	11.0	1,148.5
1984[3]	46.5	3.3	9.5	11.8	1.1	2.1	34.5	17.4	12.9	304.2	297.3	78.9	.1	8.8	1,113.5

[1] Preliminary. [2] Chiefly pipes, traps & bends. [3] Estimate. [4] Gasoline additives. *Source: Bureau of Mines* T.358

Salient Statistics of Lead in the United States In Thousands of Metric Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production of Refined Lead From: Domestic Ores[2]	Foreign Ores[2]	Total Primary	Secondary Sources	Total	Total Value of Refined Mil. $	Secondary Lead Recovered: As Refined Metal	In Antimonial Lead	In Other Alloys	Total	Total Value of Secondary Mil. $	Dec. 31 Stocks: Producers' Stocks[3]	Consumers' Stocks	Avg. Price (¢ per Lb.): New York	London
1976	15	515.8	76.5	592.3	—	592.3	301.6	282.1	310.2	66.8	659.1	335.7	110.4	117.6	23.10	20.46
1977	13	486.7	62.0	548.7	.1	548.8	371.4	303.1	383.4	71.1	757.6	512.8	91.1	121.4	30.70	28.00
1978	12	501.6	63.5	565.2	1.2	566.4	419.3	282.6	409.9	76.5	769.2	570.7	98.7	125.2	33.65	29.86
1979	5	530.0	45.6	575.6	2.9	578.5	668.0	352.2	378.8	70.3	801.4	930.0	89.3	153.2	52.64	54.52
1980	[5]	508.2	39.4	547.6	2.1	549.7	512.6	315.2	306.7	53.7	675.6	632.4	126.0	126.2	42.46	41.21
1981	1	440.2	55.1	495.3	1.7	497.1	398.9	282.2	304.4	54.6	641.1	516.3	140.2	123.2	36.53	33.30
1982	3	459.9	52.3	512.2	.7	512.8	288.4	240.5	284.4	46.4	571.3	321.7	125.5	97.2	25.54	24.66
1983[1]	14	459.3	55.2	514.5	.6	515.2	245.9	189.6	271.6	42.3	503.5	240.7	106.7	100.8	21.68	19.27
1984[4]	18					396.6					547.4			68.8	25.55	20.12

[1] Preliminary. [2] And base bullion. [3] At primary smelters & refineries. [4] Estimates. [5] Net exporter. *Source: Bureau of Mines* T.357

U.S. Mine Production of Recoverable Lead In Thousands of Metric Tons

Year	Arizona	California	Colorado	Idaho	Illinois	New York	Missouri	Montana	Nevada	New Mexico	Oklahoma	Utah	Virginia	Washington	Wisconsin	Total U.S.[2]
1976	.3	.1	24.3	48.7	N.A.	2.9	454.5	.1	.5	N.A.	N.A.	14.8	1.8	N.A.	N.A.	553.0
1977	.3	—	20.9	42.9	N.A.	2.5	453.8	.1	.7	N.A.	N.A.	9.7	2.0	1.1	N.A.	537.5
1978	.4	N.A.	15.2	44.8	N.A.	1.0	461.8	.1	.7	N.A.	—	2.5	1.8	N.A.	N.A.	529.7
1979	.4	N.A.	7.6	42.6	N.A.	.5	472.1	.3	—	N.A.	—	N.A.	1.6	—	N.A.	525.6
1980	.2	N.A.	10.3	38.6	N.A.	.9	497.2	.3	—	—	—	—	1.6	N.A.	—	550.4
1981	1.0	N.A.	11.4	38.4	N.A.	1.0	389.7	.2	N.A.	N.A.	—	1.7	1.6	—	—	445.5
1982	.4	N.A.	N.A.	N.A.	N.A.	1.1	474.5	.7	N.A.	N.A.	—	N.A.	—	N.A.	—	512.5
1983	.1	N.A.	N.A.	25.7	N.A.	1.3	409.3	1.2	—	.3	—	—	—	—	—	449.0
1984[1]																321.2

[1] Preliminary. [2] Includes Alaska. *Source: Bureau of Mines* T.356

U.S. Foreign Trade of Lead In Thousands of Metric Tons

Year	Exports: Ore & Concentrate	Unwrought Lead[3]	Wrought Lead[4]	Scrap	Total	Imports for Consumption: Ores, Flue Dust or Fume & Mattes	Base Bullion	Pigs & Bars	Reclaimed Scrap, Etc.	Value Million $	General Imports From: Ore, Flue Dust & Matte: Australia	Peru	Canada	Pigs & Bars: Australia	Mexico	Peru	Canada
1977		4.3	4.7	77.5	86.5	88.8	7.3	230.1	3.5	196.9	16.6	6.6	16.0	19.9	71.8	30.4	75.4
1978		3.2	5.1	98.6	106.9	61.9	4.3	225.4	3.3	203.0	6.5	6.3	19.6	16.3	80.2	25.7	70.4
1979		7.4	3.3	119.7	130.4	44.4	1.7	182.6	4.0	248.3	1.9	12.4	12.8	17.3	73.6	17.9	
1980	27.6	156.5	8.0	119.7	284.2	29.6	.3	81.3	2.9	116.5	3.0	18.0	8.5	11.3	28.6	3.3	34.9
1981	33.0	16.8	6.5	59.4	82.7	27.2	.4	100.1	2.7	110.5	2.2	14.1	23.5	10.9	33.7	2.9	50.8
1982	29.1	51.0	4.6	51.8	136.5	18.9	—	94.9	4.8	69.9	7.7	14.5	4.8	7.3	23.5	8.3	49.8
1983[1]	20.1	17.7	2.8	50.9	91.5	19.8	.1	134.4	4.2	89.9	10.0	22.7	6.1	10.9	34.9	10.1	72.7
1984[2]				45.1		29.9	—	161.5	5.0		17.0	22.7	14.1	10.9	39.5	9.2	94.9

[1] Preliminary. [2] Estimates. [3] And lead alloys. [4] Blocks, Pigs, etc. *Source: Bureau of Mines* T.359

U.S. Mine Production of Recoverable Lead In Thousands of Metric Tons[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	50.4	52.0	57.8	50.6	51.0	50.6	48.1	51.0	49.2	49.6	49.0	50.4	609.5
1977	45.0	49.2	56.9	53.2	48.3	50.9	41.9	52.6	46.4	49.2	48.6	50.3	592.5
1978	49.8	45.0	57.1	49.4	54.3	40.1	35.5	47.6	49.5	55.5	50.0	49.1	528.8
1979	48.4	44.7	43.1	37.3	42.0	42.6	41.5	49.5	35.2	50.5	46.8	44.1	525.6
1980	51.4	50.3	49.8	48.9	49.9	46.1	43.4	41.5	39.4	48.6	39.7	41.3	550.4
1981	42.6	40.9	43.4	26.7	27.8	17.4	31.8	38.2	48.0	47.5	39.8	41.3	445.5
1982	40.5	43.5	48.7	44.3	42.1	42.6	37.0	42.9	41.7	45.0	42.1	45.1	512.5
1983[2]	44.7	39.4	37.2	36.6	35.7	28.3	35.1	43.1	37.2	37.0	38.2	34.9	449.0
1984[1]	41.8	42.6	46.2	20.9	24.0	12.2	24.8	23.4	18.6	22.4	19.5		

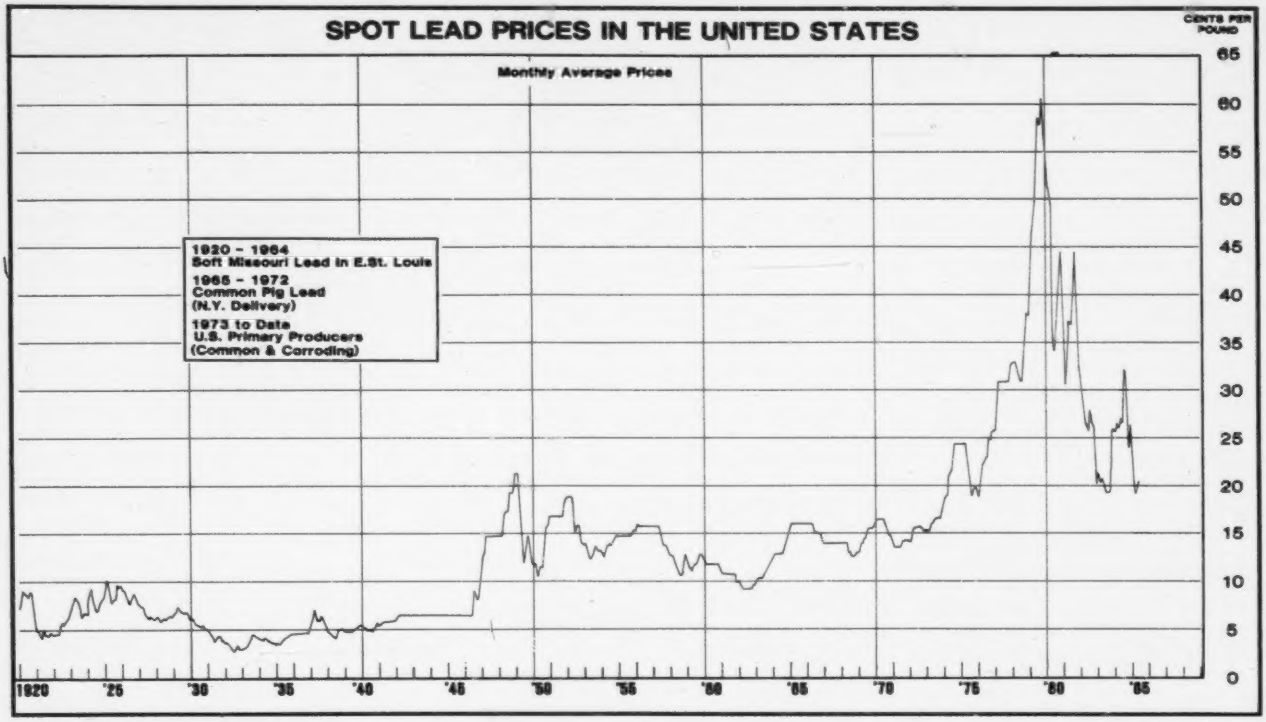
[1] Preliminary. [2] Data prior to 1983 are in thousands of short tons. *Source: Bureau of Mines* T.359A

LEAD

Average Price of Pig Lead, U.S. Primary Producers (Common Corroding) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	51.06	50.00	49.52	45.34	36.00	34.19	35.95	40.95	42.43	45.00	44.06	40.43	42.91
1981	34.13	30.63	35.32	37.68	37.10	38.23	41.25	44.64	42.52	37.59	34.34	31.75	37.10
1982	29.90	28.89	27.98	26.57	26.50	25.89	27.88	27.45	26.64	23.12	21.48	20.12	26.03
1983	21.60	20.87	20.43	21.00	20.10	19.34	19.30	19.38	22.24	25.62	26.00	25.69	21.90
1984	26.50	26.00	26.45	27.00	26.55	29.00	32.14	30.13	25.68	24.04	26.42	23.11	26.91
1985	20.45	19.76											

Source: American Metal Market T.360



SPOT LEAD PRICES IN THE UNITED STATES

Refiners Production[1] of Lead in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1980	56.9	49.3	54.1	47.5	47.0	47.1	52.0	48.2	50.2	52.2	48.4	53.5	606.4
1981	58.0	53.6	58.2	52.7	35.0	24.4	33.0	45.1	43.7	46.1	39.4	44.0	533.2
1982	50.3	45.2	44.0	36.1	54.3	53.0	44.2	46.4	49.2	50.6	50.8	48.6	572.6
1983	57.0	50.9	52.8	48.9	47.2	42.0	39.5	45.3	41.2	50.0	50.9	46.4	572.3
1984	51.5	51.4	43.0	40.0	39.2	26.2	28.4	29.1	25.3	40.8	28.0	26.5	429.2
1985	43.1	50.3											

[1] Represents refined lead produced from domestic ores by primary smelters plus small amount of secondary material passing through these smelters. Includes GSA metal purchased for remelt. *Source: American Bureau of Metal Statistics, Inc.* T.362

Domestic Shipments[1] of Lead in the United States by Refiners In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1980	40.5	37.6	38.9	28.8	30.1	35.3	36.6	48.0	60.1	55.6	31.0	38.6	481.0
1981	31.9	42.5	51.7	48.8	41.9	33.4	34.2	51.7	55.1	35.5	28.2	24.2	479.0
1982	39.3	35.8	37.0	30.7	40.9	37.8	41.9	48.1	42.6	46.7	39.8	39.7	480.4
1983	43.5	33.8	44.3	40.3	32.1	39.3	41.8	57.8	62.0	54.5	55.6	39.0	544.1
1984	46.6	43.8	36.6	34.6	36.4	26.7	26.9	35.5	38.5	39.1	40.8	29.6	435.2
1985	44.5	38.7											

[1] Includes GSA metal. *Source: American Bureau of Metal Statistics, Inc.* T.363

Total Stocks of Lead[1] in the United States at Refiners, at End of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1980	67.8	75.0	71.6	83.8	90.8	82.7	66.3	53.8	35.2	29.2	46.5	60.9
1981	86.6	92.3	88.9	87.8	71.2	61.6	59.9	52.6	38.5	49.1	57.5	62.8
1982	65.4	67.2	65.9	60.1	65.1	73.2	70.8	64.9	71.4	72.9	78.0	79.0
1983	83.3	91.2	84.9	89.0	100.6	98.6	95.3	82.1	61.3	56.6	51.6	58.9
1984	63.3	70.3	76.1	81.5	84.2	83.5	84.9	78.4	64.8	66.2	53.0	49.7
1985	48.2	59.6										

[1] Stocks at own plant & elsewhere. *Source: American Bureau of Metal Statistics, Inc.* T.364

Total[1] Lead Consumption in the United States In Thousands of Metric[2] Tons

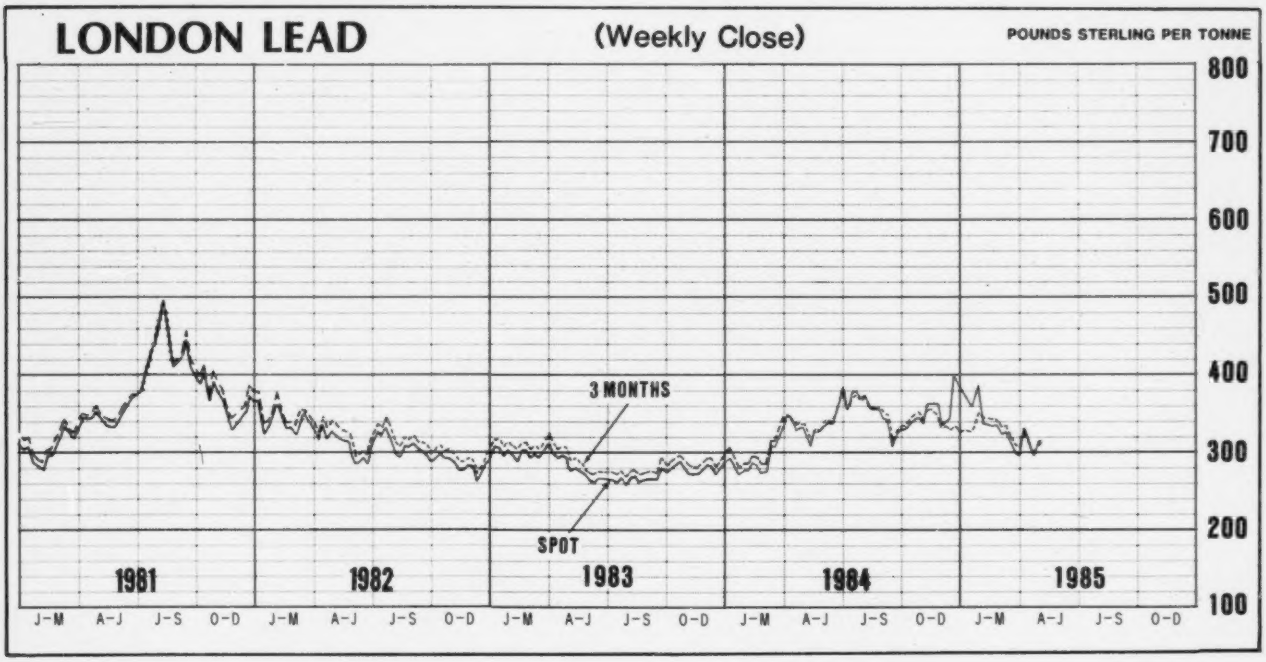
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	114.6	111.0	124.3	109.5	116.7	108.5	91.3	106.0	109.3	112.1	106.3	94.0	1,358
1980	97.3	84.9	90.0	83.8	84.1	77.2	68.2	79.5	95.6	103.0	92.5	92.0	1,070
1981	98.9	90.7	95.9	91.2	89.1	91.0	81.1	93.1	99.9	110.4	94.4	107.6	1,167
1982	93.9	84.4	90.9	88.3	82.1	84.5	73.0	90.7	87.9	95.3	83.2	83.1	1,066
1983[2]	82.3	70.9	80.4	83.1	81.9	90.6	79.8	94.6	104.2	102.3	95.3	121.4	1,149
1984	112.7	94.1	96.8	89.5	87.3	96.4	82.7	97.3	96.7	103.2	92.9		

[1] Represents total consumption of primary & secondary lead as metal, in chemicals, or in alloys. [2] Data prior to 1983 are in thousands of short tons. *Source: Bureau of Mines* T.365

U.S. Lead Recovered from Scrap (Lead Content) In Thousands of Metric[2] Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	54.6	60.5	65.1	64.1	62.0	65.2	51.3	58.1	58.2	65.0	60.7	54.3	801.4
1980	59.2	55.4	59.6	59.1	51.2	57.1	45.9	52.2	56.0	50.2	58.1	54.9	675.6
1981	46.5	43.9	43.8	42.5	44.1	46.7	46.4	49.1	52.5	50.9	52.2	48.7	641.1
1982[1]	45.5	48.2	48.0	47.6	46.1	44.8	34.4	44.2	41.9	44.6	41.9	41.5	528.8
1983[2]	41.3	37.4	41.0	41.3	42.5	37.3	37.2	39.6	43.4	48.9	48.4	45.7	504.1
1984[1]	44.4	48.6	47.6	48.5	46.6	46.7	44.5	50.0	49.0	51.7	48.1		

[1] Preliminary. [2] Data prior to 1983 are in thousands of short tons. *Source: Bureau of Mines* T.366



Lumber & Plywood

According to figures compiled by the National Forest Products Association and regional U.S. trade associations, nearly 31 billion board feet of lumber were produced by softwood lumber manufacturers in the U.S. during 1984. This was the highest annual production since 1979 and about 3.8 percent over the 1983 total. Other trade sources estimated that production of western lumber could fall to 16.5 billion board feet in 1985, about 3 percent under 1984 production. This projection was based on an estimated 1985 housing starts level of 1.65 million units, down from 1.74 million in 1984. Single-family houses, which require almost 3 times as much wood as do multi-family units, were expected to increase their share of total housing construction in 1985.

The solid performance of housing and residential construction during 1984 helped the wood products industry to continue the recovery experienced by most wood products producers in 1983. Shipments of furniture also increased during 1984 as part of improving broad-based demand. However, because of the strong dollar and competition from other shipping countries, U.S. shipments to major foreign markets were depressed.

Although production records were set in some sectors of the wood products industry, prices were generally unsteady. Liquidation sales and the problems encountered by wood products firms in the Pacific Northwest, as well as the continuing growth in Canadian lumber imports tended to keep prices off balance. Canadian softwood lumber was reported to account for over a third of total U.S. consumption.

Many West Coast U.S. contractors who placed high bids to purchase timber from U.S. Government-owned land continued to have problems. Buyers of Federal timber sold prior to 1983 had mostly overbid in order to acquire timber. However, depressed demand and falling prices made the stumpage too costly to cut. Extensions of timber sales contracts for five years, announced by the government in late 1983, relieved these costs to some extent. Attempts to estimate supplies in 1984, however, were complicated by the spruce budworm infestations that affected timber in New England and the Great Lakes states. Also, pine beetle infestation continued to necessitate the premature harvesting of southern pine, especially in the Texas areas. The gypsy moth infestation that most affected Northeast producing areas reportedly began spreading toward southern areas—a fact of concern to traditional hardwood-using industries. These infestations were not, however, considered a major threat to the industry.

The strengthening residential construction industry, which accounted for more than 40 percent of the softwood lumber consumed in the U.S. helped the softwood industry continue to grow in 1984. During the first half of the year, for example, softwood lumber production rose by 14.5 billion board feet, 11.1 percent over the comparable 1983 level. Shipments of softwood lumber in the same period rose by 10.4 percent to 14.1 billion board feet. The amount of lumber used in residential construction during 1984 was estimated at about 4.6 percent over the 1983 level, and, at the same time, nonresidential construction use reportedly increased nearly 6 percent over 1983. Lumber used for residential and nonresidential repair and remodeling showed particular strength during 1984.

Increased demand from the major hardwood-consuming industries, particularly millwork, furniture, and materials handling (pallets and crates) provided the stimulus for increased production in the hardwood industry.

U.S. lumber exports continued to be low due to the strong dollar, and the total volume of softwood lumber exports in 1984 was reported at 1.59 billion board feet, 9 percent below the 1983 total. Although the U.S. imported lumber from more than 50 countries, Canada supplied nearly 98 percent of total imports during 1984. Imports from Canada were mostly of the softwood species used mostly for construction purposes. Small volumes of hardwoods such as birch, beech, and maple were also imported from Canada for use in furniture manufacturing and flooring. Lumber imports from Canada had followed a rising trend for several years, and they accounted for about 32 percent of total U.S. softwood lumber consumption during 1984.

Total shipments of softwood plywood in 1984 were reported by the American Plywood Association (APA) at a record-breaking 21.3 billion square feet as capacity utilization rates for the year averaged more than 90 percent. Softwood plywood was probably distributed during 1984 at or close to 1983 levels, that is, new housing, 40 percent; homeowner repair and remodeling, 29 percent; nonresidental construction, 14 percent; industrial, 14 percent; and exports, 3 percent. A 35 percent decline in softwood plywood exports to 370.6 million square feet was centered, surprisingly enough, in the EC countries, where the U.S. industry launched strong trade promotion efforts. U.S. imports of softwood plywood came mostly from Canada, a fact that was influenced by weakness in the Canadian dollar. Although Canadian imports constituted less than 1 percent of new supplies, they provided significant competition for some specific U.S. products. However, the tariff duty rate of 20 percent and the strong position of the panel industry discouraged imports of standard softwood plywood into the U.S.

Over half of the demand for particleboard was accounted for by construction end-uses such as sheathing, floor underlayment, roof decking, mobile home decking, etc. Shipments of particleboard from all producers during 1984 amounted to 3.1 billion square feet, well below the record of 3.6 billion set in the previous decade. The calculated physical volume of particleboard imports into the U.S., based on partial-year data, were 1.3 million square feet, nearly 11 percent over the 1983 figure. Approximately 90 percent of the particleboard imports came from Canada, which benefited from a favorable currency exchange rate. Significant quantities of imports also came from Mexico. Exports of particleboard showed sharp gains despite the strong dollar. Major foreign markets were Canada, Japan, South Korea, and Taiwan.

Futures Market

Lumber futures are traded on the Chicago Mercantile Exchange.

Salient Statistics of Lumber in the United States

Year	Industrial Roundwood Used for								Fuelwood Consumption	Apparent Prod. & Consum. All Pdt's.	National Forest Stumpage Prices					
	Lumber	Pulp Products	Plywood & Veneer	Other Pdts.[2]	Total[2]	Imports	Exports	Apparent Consumption			All Eastern Hardwoods	Douglas Fir	Southern Pine	Western Hemlock	Ponderosa Pine	Maple
	In Million Cubic Feet										$ Per 1,000 Board Ft.					
1976	5,475	3,805	1,355	380	11,815	2,840	1,870	12,785	600	13,390	34.90	176.20	87.00	79.70	101.80	36.60
1977	5,730	3,645	1,425	385	11,960	3,310	1,795	13,475	1,030	14,505	37.90	225.90	100.30	89.30	131.40	41.20
1978	5,825	3,745	1,460	400	12,240	3,755	1,845	14,145	1,570	15,720	41.10	250.30	134.50	113.60	164.70	57.40
1979	5,680	4,110	1,370	405	12,510	3,655	2,135	14,030	2,270	16,300	46.80	394.40	155.20	200.80	239.00	33.90
1980	4,860	4,390	1,175	385	11,645	3,250	2,350	12,550	3,115	15,665	52.40	432.20	155.40	212.70	206.10	37.40
1981	4,395	4,135	1,180	355	10,710	3,165	2,100	11,775	3,650	15,425	50.90	350.20	172.00	163.40	195.20	41.50
1982	3,890	3,955	1,070	325	9,965	3,010	1,995	10,975	3,685	14,665	56.40	118.20	127.20	44.50	66.90	34.30
1983[1]											60.10	161.60	140.60	62.20	104.00	25.00

[1] Preliminary. [2] Excludes fuelwood. Includes cooperage logs, poles & piling, fence posts, etc. *Sources: National Lumber Manufacturers Ass'n.: U.S. Dept. of Commerce; Forest Service*

T.367

United States Lumber Shipments In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	2,762	2,790	3,107	3,155	2,944	3,150	3,122	3,324	3,167	3,167	2,911	2,951	35,612
1977	2,683	2,873	3,362	3,364	3,314	3,387	3,077	3,358	3,296	3,269	2,859	2,983	37,899
1978	2,699	2,741	3,158	3,133	3,355	3,548	3,156	3,357	3,250	3,262	3,116	2,907	37,712
1979	2,813	2,756	3,279	3,107	3,329	3,087	3,128	3,408	3,106	3,224	2,777	2,589	36,514
1980	2,707	2,791	2,538	2,343	2,512	2,530	2,454	2,716	2,708	2,851	2,494	2,350	31,126
1981	2,424	2,379	2,752	2,755	2,633	2,765	2,395	2,431	2,260	2,382	2,045	1,989	29,491
1982	1,637	1,837	2,148	2,336	2,308	2,513	2,363	2,450	2,260	2,506	2,353	2,162	25,960
1983[1]	2,435	2,290	2,632	2,683	2,775	2,764	2,537	2,669	2,737	2,795	2,404	2,445	31,358
1984[1]	2,589	2,603	3,022	2,875	2,852	2,993	2,756	2,950	2,688	3,154			

[1] Preliminary. *Source: National Lumber Manufacturers' Association*

T.368

Stocks (Gross) of Lumber in the United States, Beginning of Month In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1976	4,938	4,894	4,926	4,963	5,016	5,123	4,922	4,763	4,794	4,854	4,991	5,062
1977	5,086	5,171	5,228	5,325	5,197	5,133	4,964	4,854	4,787	4,859	4,876	4,855
1978	4,850	4,963	5,128	5,201	5,190	5,038	4,877	4,705	4,632	4,669	4,740	4,731
1979	4,795	4,811	4,932	4,964	4,975	4,868	5,003	4,893	4,843	4,875	5,063	5,207
1980	5,342	5,301	5,374	5,721	5,769	5,568	5,534	5,570	5,659	5,776	5,832	5,826
1981	5,805	5,883	6,065	6,098	6,123	6,213	6,015	6,103	6,232	6,284	6,285	6,075
1982	5,927	6,016	6,068	6,042	5,983	5,915	5,853	5,867	5,977	6,163	5,986	5,881
1983[1]	5,745	5,770	5,950	5,997	5,924	5,824	5,772	5,817	5,858	5,870	5,862	5,964
1984[1]	5,866	6,021	6,097	6,178	6,287	6,283	6,257	6,186	6,176	6,265	6,239	

[1] Preliminary. *Source: National Lumber Manufacturers' Association*

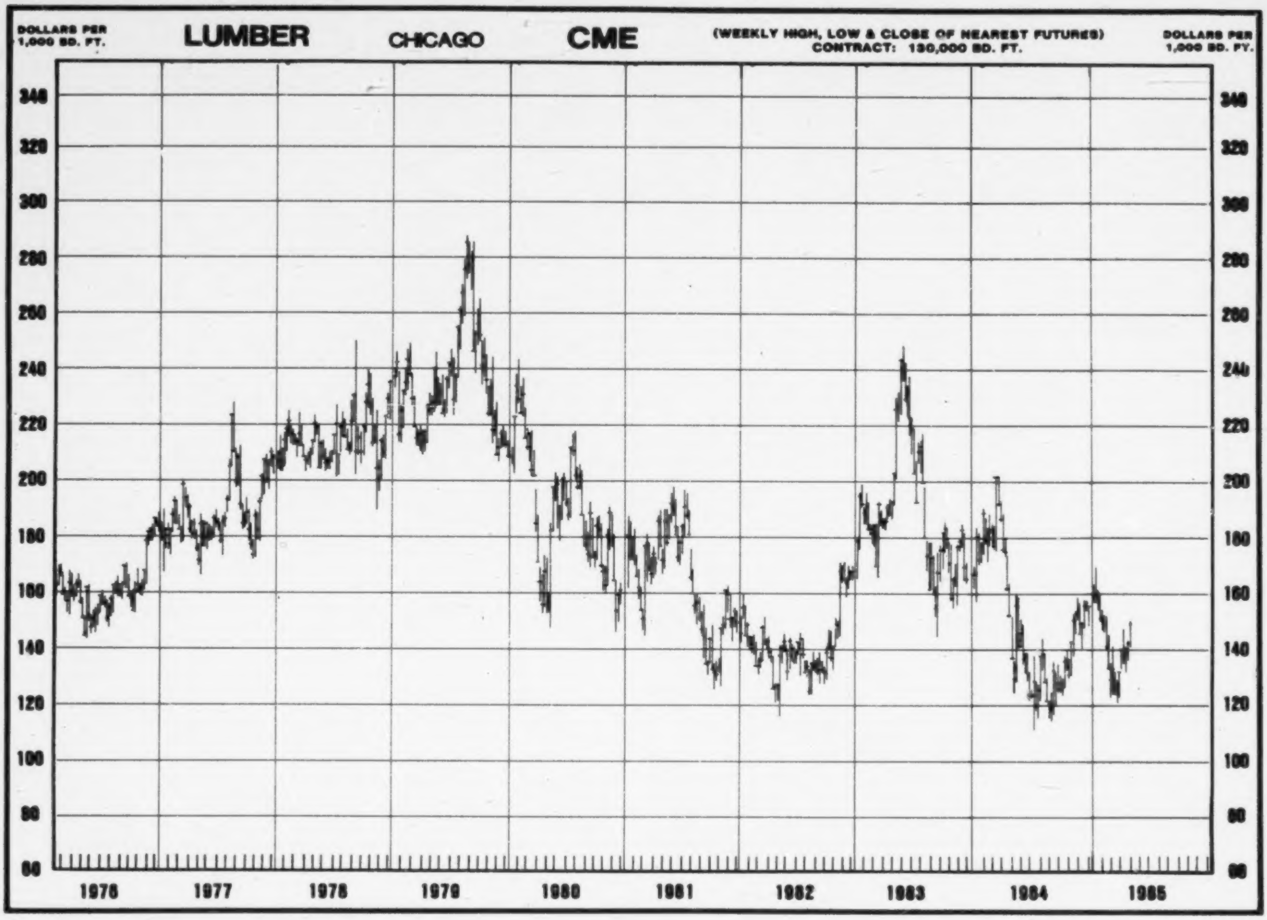
T.369

Lumber Production[1] in the United States In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	2,821	2,804	3,144	3,209	2,960	2,949	2,963	3,265	3,226	3,305	2,972	2,921	35,760
1977	2,822	2,930	3,388	3,260	3,253	3,160	2,975	3,290	3,368	3,268	2,839	2,944	37,667
1978	2,843	2,904	3,222	3,127	3,203	3,333	2,988	3,263	3,285	3,333	3,102	2,931	37,657
1979	2,877	2,877	3,306	3,119	3,219	3,143	3,018	3,355	3,131	3,412	2,914	2,631	37,061
1980	2,798	2,855	2,879	2,257	2,307	2,486	2,479	2,783	2,818	2,903	2,480	2,329	31,632
1981	2,523	2,542	2,818	2,780	2,651	2,588	2,483	2,554	2,307	2,379	1,831	1,765	29,592
1982	1,810	1,891	2,148	2,281	2,251	2,338	2,376	2,560	2,445	2,333	2,247	2,004	25,795
1983[2]	2,484	2,481	2,682	2,623	2,645	2,718	2,585	2,714	2,748	2,787	2,504	2,345	31,479
1984[2]	2,740	2,678	3,104	2,983	2,828	2,968	2,685	2,933	2,776	3,154			

[1] Adjusted with Census reports on lumber production. [2] Preliminary. *Source: National Lumber Manufacturers' Association*

T.374



Month-End Open Interest of Lumber Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	7,523	8,770	8,202	8,390	9,233	8,362	7,730	8,078	7,551	7,365	6,547	8,122
1979	8,420	9,059	7,851	7,127	8,055	7,380	8,901	11,039	10,426	10,664	10,125	10,260
1980	10,839	10,587	9,948	10,130	11,452	11,736	12,461	11,644	13,734	14,251	12,829	9,338
1981	8,882	9,053	8,029	8,102	7,639	8,161	8,554	7,586	7,690	8,809	8,808	9,067
1982	9,328	8,982	6,990	7,460	6,578	5,648	4,629	5,789	6,088	8,282	10,490	9,915
1983	10,492	10,610	10,793	11,425	9,070	8,187	7,963	8,552	8,324	6,771	6,595	7,512
1984	8,673	8,614	8,973	8,810	7,487	7,631	7,519	8,157	7,757	8,955	9,374	9,949
1985	9,702	8,984	8,447									

Source: Chicago Mercantile Exchange

T.370

Volume of Trading of Lumber Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	47,910	43,703	46,876	43,759	42,578	36,330	38,252	46,138	49,347	55,495	54,371	55,739	560,498
1979	60,964	57,594	52,316	43,097	46,530	50,265	56,421	62,923	56,421	71,581	63,777	39,980	649,478
1980	59,063	61,288	73,412	86,057	81,960	68,528	76,296	65,740	73,660	76,984	59,076	58,376	838,676
1981	57,173	45,937	54,295	60,517	51,007	58,879	49,427	49,428	45,592	57,021	55,044	51,614	635,934
1982	51,268	45,193	44,717	44,116	40,828	47,512	34,624	35,432	29,835	47,761	51,046	44,387	516,619
1983	54,976	56,706	51,520	48,327	77,107	73,554	62,053	76,322	68,019	68,228	44,266	49,925	731,003
1984	51,170	70,031	57,075	68,314	88,009	59,592	60,156	65,739	60,035	61,012	52,496	59,939	753,568
1985	71,719	55,737	57,718										

Source: Chicago Mercantile Exchange

T.371

High, Low & Closing Prices of May Lumber Futures at Chicago In Dollars per 1,000 Board Feet

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1979	High	—	—	—	189.0	193.0	195.5	206.5	211.0	202.5	210.9	219.8	234.5	228.3	231.2	246.0	246.0
	Low	—	—	—	181.6	183.5	187.0	192.5	200.5	185.1	187.2	201.7	218.5	209.8	209.4	223.1	181.6
	Close	—	—	—	183.3	192.0	192.7	202.0	201.3	194.6	209.9	217.6	223.4	211.8	225.2	245.2	—
1980	High	—	—	—	215.0	217.0	227.0	239.5	241.0	227.5	230.2	244.4	242.2	219.3	183.0	160.0	244.4
	Low	—	—	—	208.5	211.0	214.0	222.0	197.7	201.2	216.5	215.3	215.0	181.5	153.1	146.5	146.5
	Close	—	—	—	212.7	214.6	222.7	233.5	206.3	222.8	218.4	234.1	216.3	185.5	161.5	152.2	—
1981	High	221.0	210.2	222.0	225.5	233.5	222.0	215.5	214.0	220.0	210.7	205.2	198.3	181.4	190.4	181.0	233.5
	Low	176.0	164.0	202.0	210.6	218.0	191.9	195.3	194.2	205.7	175.5	185.3	169.5	164.3	163.2	167.1	163.2
	Close	178.1	204.5	220.8	218.5	219.1	196.9	198.5	207.4	208.5	194.5	195.8	169.8	169.6	178.4	175.5	—
1982	High	—	—	—	220.3	214.3	201.5	186.0	183.0	182.8	180.0	166.5	153.1	151.9	145.2	127.5	220.3
	Low	—	—	—	204.6	199.0	183.3	160.0	157.1	162.4	163.4	147.6	142.7	137.5	120.6	115.5	115.5
	Close	—	—	—	211.0	199.3	184.0	163.2	164.8	179.2	169.1	154.0	142.9	142.4	126.8	122.6	—
1983	High	192.7	186.5	178.4	171.0	168.5	170.9	169.3	179.6	191.7	195.3	209.5	206.6	194.6	193.6	221.7	209.5
	Low	180.0	172.0	170.0	151.5	154.8	155.2	157.6	157.9	178.6	181.1	189.8	190.7	183.8	182.7	191.5	151.5
	Close	185.0	174.0	175.5	157.5	158.6	166.0	159.7	178.7	185.9	191.0	204.9	190.7	184.6	193.2	217.2	—
1984	High	237.1	240.1	245.5	234.5	231.0	221.5	213.7	217.6	209.4	205.0	194.3	199.7	201.9	188.2	150.4	245.5
	Low	228.8	228.6	222.9	221.0	214.0	200.4	195.3	198.5	196.8	189.5	184.0	182.0	186.0	148.2	125.1	125.1
	Close	231.8	239.5	230.6	228.5	214.8	207.4	213.0	199.3	202.8	194.2	185.7	197.0	186.7	148.6	130.8	—
1985	High	219.0	215.5	187.0	178.7	167.5	176.2	165.0	171.3	174.1	174.0	176.7	163.0	148.3			
	Low	214.0	185.6	167.0	160.5	147.4	153.5	151.0	154.0	165.9	158.5	163.0	146.6	121.1			
	Close	215.5	185.6	175.5	166.0	154.2	155.5	157.5	169.5	170.8	173.3	164.0	147.0	124.2			
1986	High	164.5															
	Low	153.0															
	Close	155.0															

Source: Chicago Mercantile Exchange T.377

Residential Construction Contracts Awarded (All Types) in U.S. In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	1,540	1,532	2,272	2,987	3,072	3,116	3,081	2,833	2,951	3,167	2,478	2,259	31,261
1976	2,168	2,557	3,636	4,017	3,932	4,175	4,190	4,201	3,824	4,119	3,761	3,264	44,169
1977	2,967	3,519	5,328	5,503	5,803	6,043	5,703	6,198	5,641	5,534	5,359	4,340	62,017
1978	3,925	3,863	6,333	6,850	7,801	7,917	6,823	7,120	6,496	7,080	5,973	4,715	74,949
1979	4,530	4,588	6,984	7,185	8,084	7,309	6,882	7,075	6,184	6,808	4,704	4,173	74,557
1980	4,055	4,365	4,435	4,318	4,410	5,067	6,139	6,092	6,255	6,804	5,847	5,540	63,668
1981	4,227	4,167	5,957	6,617	5,855	5,805	5,810	4,726	4,704	4,718	3,648	3,677	60,164
1982[1]	2,991	3,045	4,600	4,656	4,984	5,602	5,144	5,414	5,525	5,629	5,628	5,401	59,210
1983[1]	4,970	4,775	7,762	7,667	8,235	10,158	8,471	9,257	8,644	8,221	7,575	6,596	93,567
1984[1]	6,600	6,800	8,806	9,330	10,799	9,859	9,093	9,364	8,090	8,340	7,614	5,774	100,469

[1] Preliminary. *Source: F. W. Dodge Co.* T.372

United States Imports of Sawmill Products In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	337	377	536	571	589	671	677	431	422	388	415	552	5,968
1976	477	527	627	701	669	573	890	680	781	715	759	779	8,178
1977	691	721	906	890	996	999	934	920	938	858	956	911	10,698
1978	865	840	939	915	1,173	1,117	1,194	1,119	1,014	1,091	979	954	12,199
1979	925	761	998	925	1,237	1,011	1,010	1,043	999	924	909	771	11,513
1980	727	923	896	655	730	830	876	804	863	867	892	799	9,859
1981	756	848	966	980	992	934	842	465	660	755	728	591	9,518
1982	530	585	601	792	848	888	874	888	962	758	916	781	9,421
1983	879	933	1,055	885	1,153	1,099	1,048	1,090	1,057	1,118	1,092	885	12,294
1984	941	1,135	1,108	1,098	1,073	1,172	1,202	1,191	1,298	1,185	1,104	1,108	13,615

Source: Department of Commerce T.373

Average Index Price of Softwood Plywood—Western $ per Ths. Board Feet[1] 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	494.90	494.90	500.54	502.99	502.99	502.99	502.99	507.89	510.34	510.34	510.34	517.69	504.91
1977	530.06	536.18	559.46	584.20	589.10	598.54	609.56	609.56	643.13	650.48	653.78	677.06	603.43
1978	710.01	741.86	740.64	779.84	795.76	812.18	812.42	812.42	852.72	852.72	869.32	874.47	804.53
1979[1]	354.3	351.7	351.5	345.6	329.8	304.1	319.1	324.3	327.6	327.4	309.4	300.4	328.8
1980	293.8	308.0	302.3	256.9	275.4	301.7	324.5	346.2	324.0	324.2	330.3	343.3	310.9
1981	326.4	330.0	323.3	332.2	319.7	329.4	322.1	311.0	301.9	283.7	286.7	296.7	313.6
1982	291.3	288.4	288.7	283.5	279.2	287.6	282.3	278.8	274.9	272.52	276.5	284.6	282.4
1983	292.0	299.9	302.3	302.3	304.4	327.5	325.4	314.4	302.3	307.1	303.4	308.7	307.5
1984	312.4	320.1	318.0	308.7	289.7	288.8	290.3	308.6	305.2	307.2	302.4	302.4	304.5
1985	301.1	291.7											

[1] Prior to 1979 prices are for Lumber Redwood, Boards, Clear, F.G., Dry in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics*
(0831–01) T.379

Average Index Price of Softwood Yellow Southern Pine (Dressed) Flooring[1] (C & Better) 1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	339.73	341.37	346.27	346.27	346.27	346.27	348.55	351.17	354.43	355.09	356.07	356.07	348.96
1977	356.07	356.07	359.33	362.60	364.23	367.50	375.67	380.57	387.10	388.73	392.00	395.27	373.76
1978	400.17	403.23	406.87	405.07	409.97	409.97	413.23	419.11	421.40	424.01	424.67	426.30	413.67
1979[2]	307.0	306.4	315.7	319.0	315.8	315.2	320.7	333.7	343.6	344.4	341.1	328.2	324.2
1980	322.0	322.2	317.2	281.2	280.1	287.3	296.4	304.1	295.1	282.3	286.9	293.7	322.2
1981	291.9	292.2	294.7	308.4	313.9	309.5	297.0	291.6	279.4	273.6	267.0	279.7	291.6
1982	278.0	273.3	273.9	285.3	283.1	298.4	305.1	288.6	287.5	279.3	284.1	293.4	285.8
1983	303.0	314.8	319.3	321.3	325.5	334.9	330.0	323.4	308.3	313.5	316.2	328.2	319.9
1984	334.0	337.8	336.1	334.5	320.4	317.1	318.8	318.4	308.5	305.4	302.3	304.7	319.8
1985	303.3	294.2											

[1] Flooring. C and better, F. G., 1″ × 4″ × S/L. [2] Prices prior to 1979 are in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics*
(0811–02) T.381

Average Index Price of Ponderosa Pine[1] Softwood Lumber—No. 2 Dec. 1980 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	154.01	177.50	198.52	209.92	189.73	165.91	161.57	168.63	182.50	198.68	198.57	206.15	184.31
1977	227.16	232.18	245.58	251.21	239.98	216.44	219.96	232.57	236.48	235.28	215.40	226.17	231.53
1978	247.58	263.85	264.90	267.57	240.07	251.25	232.33	236.92	254.23	267.17	N.A.	317.01	237.07
1979	304.49	332.11	366.87	371.17	342.59	338.16	306.16	301.95	309.48	316.41	277.35	240.42	317.26
1980	252.62	291.36	314.97	242.34	215.48	252.06	310.05	327.35	304.06	293.25	306.22	340.83	287.55
1981[2]	102.9	102.3	103.7	107.8	111.2	110.4	106.9	103.6	100.0	93.0	90.6	93.4	102.2
1982	N.A.	95.0	97.6	99.0	97.7	97.3	98.3	95.6	91.7	87.9	86.1	90.8	94.5
1983	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	103.8	88.3	90.1	N.A.	91.3	93.4
1984	93.6	101.3	102.5	97.0	87.7	89.5	87.6	89.6	89.5	89.4	91.6	93.9	92.8
1985	95.6	97.5											

[1] No. 3 1″ × 12″, B.L. (6′ and over). [2] Prices prior to 1981 are for Ponderosa Pine in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics*
(0811–0312.99) T.380

Average Index Price of Douglas Fir Softwood Lumber—Dimension, Construction, Dried, 2″ × 4″, R.L.[1] 1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	175.43	178.29	184.90	180.05	176.06	171.45	187.49	195.59	215.08	207.79	204.02	218.77	191.24
1977	228.38	225.50	232.09	226.05	225.42	213.79	230.93	242.51	256.92	237.27	218.03	227.70	230.38
1978	238.08	241.81	246.28	238.48	238.48	245.28	245.00	272.06	274.74	266.66	271.51	262.40	253.39
1979[2]	357.2	360.1	371.0	381.1	381.8	378.3	387.4	408.4	424.0	410.4	378.7	368.8	383.9
1980	363.3	367.1	358.8	327.1	329.6	353.2	358.7	360.0	357.1	354.5	352.9	353.4	353.0
1981	347.2	330.4	321.8	332.7	328.5	333.1	320.1	318.3	296.8	277.6	268.0	267.0	311.8
1982	269.1	262.2	258.5	265.6	262.1	271.8	277.8	268.9	269.6	261.8	259.9	272.5	266.6
1983	312.1	370.3	376.2	375.5	390.2	404.7	407.0	381.4	345.3	332.0	318.7	324.7	361.5
1984	322.8	351.7	369.7	364.3	335.8	322.8	307.8	309.2	312.5	301.6	312.7	325.8	328.1
1985	333.0	341.3											

[1] Dried, S4S, mixed carlots, f.o.b. mill, rail shipment. [2] Prices prior to 1979 are in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics*
(0811–01) T.382

Magnesium

World production of magnesium metal in 1984 was nearly 6% larger than in 1983. Production in the U.S., the world's largest producer, was 38% larger than in 1983, according to preliminary data of the U.S. Bureau of Mines. Domestic magnesium metal production is derived from natural brine solutions or the mineral dolomite. Domestic primary producers restarted idled production facilities in response to increased demand for magnesium in aluminum alloys, die castings, and for desulfurization in the iron and steel industry.

U.S. primary consumption of magnesium metal in 1984 was estimated to have increased by about 10 percent. Aluminum alloys were estimated to have accounted for about 56 percent of the metal used in 1984; casting and wrought products—18 percent; cathodic protection—7 percent; reducing agent—6 percent; manufacture of nodular cast iron—3 percent; other uses—10 percent.

The U.S. is a net exporter of magnesium metal by a wide margin. Exports in 1984 were 4 percent above those for 1983, and consisted almost entirely of metal and alloys in crude form and in scrap.

U.S. imports of magnesium metal in 1984 were 48 percent higher than in 1983. Canada, Norway, France, and Italy are the major sources of imports.

It was estimated by the Bureau of Mines that U.S. apparent consumption and production of magnesium metal would increase in 1985. Demand for magnesium metal, from a 1978 base, was projected by the Bureau of Mines to increase at an average annual rate of about 5 percent through 1990.

Resources from which magnesium metal may be recovered are almost unlimited and also globally widespread. In addition, zinc and aluminum can be substituted for magnesium castings and wrought products. There is no National Defense Stockpile goal or inventory.

Dow Chemical Co. and AMAX Inc. increased the price of primary magnesium ingot from $1.38 to $1.43 per pound on January 3, 1984. The die casting alloy price was increased to $1.26 per pound by Amax and to $1.30 by Dow in early April. These prices held throughout the remainder of 1984.

World Production of Magnesium (Primary and Secondary) In Short Tons

												Secondary Production		
Year	Canada	China	France	India	Italy	Japan	Norway	USSR	United States	Yugoslavia	World Total[1]	Japan	Un. Kingdom[3]	United States
1973	6,840	1,100	9,511		9,850	12,349	41,360	63,000	122,431		266,441			
1974	6,535	1,100	7,199		8,191	9,836	43,866	66,000	N.A.		142,727			
1975	4,217	1,100	8,303		6,993	9,412	42,259	66,000	N.A.		138,284			
1976	6,715	5,500	8,857	33	9,740	12,335	42,778	69,000	119,957	—	274,882		3,000	
1977	8,414	5,500	9,570	—	9,663	10,379	42,070	72,000	125,958	—	283,554		3,000	
1978	9,159	6,600	9,370	25	10,668	12,304	43,166	77,000	149,463	0	317,755	12,057	3,000	
1979	9,937	6,600	9,968	0	9,653	12,531	48,697	79,000	162,464	0	338,850	18,058	3,000	37,222
1980	10,199	7,700	10,282	0	8,693	10,199	48,890	83,000	169,477	0	348,440	26,314	3,000	40,461
1981	9,370	7,700	8,006	0	8,623	6,247	52,472	86,000	153,782	4,254	336,454	31,345	2,094	46,256
1982	5,600	7,700	10,593	0	8,466	6,123	38,581	89,000	102,197	4,400	272,660	24,000	1,938	43,232
1983[2]	8,600	7,700	10,470	—	8,490	6,652	38,580	91,000	115,431	4,400	291,323	13,890	1,980	46,329
1984[1]	9,000	8,000	10,000		9,000	7,000	40,000	91,000	130,000	4,000	308,000			45,000
1985														

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines* T.383

Salient Statistics of Magnesium in the United States In Short Tons

	Production								Domestic Consumption of Primary Magnesium				
		Secondary							Structural Products				
Year	Primary (Ingot)	New Scrap	Old Scrap	Total	Exports[2]	Imports for Consumption	Consumer Stocks Dec. 31[3]	$ Price per Pound[4]	Castings	Wrought	Total	Other Uses[5]	Total
1973	122,431	13,535	4,101	17,636	39,585	3,325	18,894	.37¼	12,137	12,965	25,102	90,672	115,774
1974	N.A.	9,155	5,719	14,874	46,398	5,305	23,000	41¼-.75	14,176	13,348	27,524	102,524	130,048
1975	120,203	18,090	9,783	27,873	32,591	7,903	19,664	.82	9,488	9,666	19,154	75,013	94,167
1976	119,957	19,024	11,529	30,553	13,444	14,907	17,295	.87-.92	7,051	10,241	17,292	87,161	104,453
1977	125,958	20,170	12,524	32,694	28,061	5,964	11,838	.96-.99	7,201	12,632	19,833	83,743	103,576
1978	149,463	22,135	14,093	36,228	41,807	6,668	12,583	.99-1.01	7,651	11,075	18,726	90,232	108,958
1979	162,464	23,340	13,882	37,222	54,280	4,754	13,901	1.01-1.09	7,460	11,562	19,022	89,822	108,844
1980	169,477	22,907	17,554	40,461	56,761	3,757	14,393	1.07-1.25	5,847	11,620	17,467	78,321	95,788
1981	153,782	22,073	24,183	46,256	34,855	6,897	11,367	1.25-1.34	4,951	10,376	15,327	76,134	91,461
1982	102,197	19,801	23,431	43,232	39,613	4,784	10,268	1.34	3,600	10,128	13,728	60,871	74,599
1983[6]	115,431	21,591	24,738	46,329	46,690	6,350	11,329	1.34-1.38	6,941	7,835	14,776	67,200	81,976
1984[1]	159,207			45,000	48,338	9,385		1.43-1.48					90,000
1985													

[1] Estimate. [2] Metal & alloys in crude form, & scrap. [3] Primary magnesium. Gov't. agencies continue to hold quantities of primary magnesium. [4] Magnesium ingots (99.8%) f.o.b. Valasco, Texas. [5] Distributive or sacrificial purposes. [6] Preliminary. *Source: Bureau of Mines* T.384

Manganese

World mine production of manganese ore in 1984 was marginally higher than in 1983, according to a preliminary estimate of the U.S. Bureau of Mines. The USSR continued as the world's largest producer, accounting for an estimated 47 percent of the total, but it no longer supplies ore to market economy countries. Production in the Republic of South Africa, the second largest producer, was estimated to have declined about 15 percent in 1984. The USSR and the Republic of South Africa account for more than 80 percent of the world's identified resources of ore. Extensive manganese oxide deposits are found on the deep ocean floors, especially in the equatorial area of the Pacific Ocean.

No manganese ore containing 35 percent or more manganese was produced in the U.S. in 1984. Net import reliance is estimated at 99 percent of apparent U.S. consumption. Imports of manganese ore and dioxide dropped 11 percent in 1984 while imports of alloy and metal rose 17 percent, with total import for consumption up 8 percent compared to 1983 figures, manganese content. U.S. imports for consumption, of silicomanganese (manganese content) were about unchanged in 1984 from 1983 imports, but there were shifts in sources, with Brazil increasing its share while the Republic of South Africa's share was reduced considerably. Imports of ferromanganese (high carbon) increased about 16 percent, with total imports (high, medium and low carbon) increased 21 percent in 1984. France remained the most important supplier of high carbon ferromanganese. Unusually large shipments of ore from the U.S. were exported; mainly to France, Canada, Italy, and Mexico.

U.S. consumption of manganese ferroalloys and metal increased in 1984 compared to 1983, according to preliminary data of the U.S. Bureau of Mines, paced by silicomanganese which rose by more than 25 percent. Consumption increases were in line with gains in raw steel production and the corresponding rates of manganese consumption in steelmaking. Consumption of manganese ore containing 35 percent or more manganese was placed at 450,000 tons, exclusive of that used directly in manufacturing pig iron and steel. A large share of ore was converted to manganese ferroalloys for use in steel production. Most of the remainder was used in producing pig iron and dry cell batteries, and for various chemical uses. End uses were construction—23 percent; transportation—19 percent; machinery—14 percent; other uses—44 percent. U.S. apparent consumption of manganese in 1985, content basis, is expected by the Bureau of Mines to be 750,000 tons. From a 1983 base, U.S. demand of manganese is expected to follow the raw steel production trend and increase at an average annual rate of about 3 percent through 1990. There is no satisfactory substitute for manganese in its major applications.

General Services Administration (GSA) net sales of manganese meterials in 1984 totaled 6,040 tons of stockpile-grade natural battery ore, 19,847 tons of stockpile-grade chemical ore, and 8,400 tons of nonstockpile-grade metallurgical ore. As of November 30, 1984, the National Defense Stockpile contained 2.368 million tons of metallurgical ore versus a goal of 2.700 million and various amounts of other ore and metal. As of October 1, 1984, the GSA's authority to dispose of manganese material was changed to include all nonstockpile-grade natural battery and metallurgical ore in inventory, and for metallurgical ore the authority for disposal was increased by 292,000 tons.

U.S. industry stocks of manganese ore amounted to 459,000 tons at the end of 1984 versus 469,029 tons a year earlier.

World Production of Manganese Ore In Thousands of Short Tons

Year % Mn	Australia[3] 37–53	Brazil 38–50	Chile 32–35	China 20+	Gabon 50–53	Ghana 30–50	Hungary[4] 30–33	India 10–54	Japan 24–27	Mexico 27+	Morocco 50–53	South Africa 30–48+	USSR 30–31	Zaire (Congo) 30–57	World Total
1979	1,871	2,490	27.5	1,650	2,535	300.0	91.0	1,952	96.9	543.1	149.6	5,713	11,292	—	28,950
1980	2,204	2,515	30.5	1,760	2,366	278.3	91.0	1,865	87.7	492.9	144.8	6,278	10,750	7	29,089
1981	1,555	2,251	28	1,760	1,640	246	78.0	1,682	96	637	121	5,555	10,090	34	25,894
1982[1]	1,248	2,580	18	1,760	1,667	176	91	1,596	86	561	106	5,750	10,830	33	26,607
1983[2]	1,491	2,300	18	1,760	2,047	210	94	1,455	85	386	81	3,181	11,500	33	24,739
1984[2]	1,800	2,300		1,800	2,300			1,400				2,700	11,600		24,900

[1] Preliminary. [2] Estimated. [3] Metallurgical Ore. [4] Concentrate. *Source: Bureau of Mines* T.385

Salient Statistics of Manganese in the United States In Thousands of Short Tons (Gross Weight)

		Manganese Ore (35% or More Mn)						Ferromanganese							
		Consumption by Use										Manganiferous Ore[3]		Spiegeleisen	
Year	Net Import Reliance as a % of Apparent Consumption	Alloys and Metal	Pig Iron Steel	Dry Cells, Misc.	General Imports	Consumption	Stocks, Dec. 31[2]	Domes. Production	Imports for Consumption	Exports	Consumption	Production	Value Mil. $[4]	Stocks Dec. 31[2]	Consumption
1979	98	913.5	230.7	228.0	500	1,372	1,098	317.1	821.2	25.3	976.5	240.7	2.9	.1	3
1980	98	727.5	131.5	211.7	698	1,071	1,030	189.5	605.7	11.7	789.1	173.9	2.4	—	.3
1981	98	744.8	147.8	184.0	639	1,077	1,036	192.7	671.2	14.9	820.9	174.8	2.9	—	.1
1982	99	412.3	83.9	112.6	238	609	751	119.0	492.7	10.3	439.2	31.5	.3	—	.1
1983[1]	99	274.3	105.5	150.9	368	531	617	86	341.6	8.4	446.3	34	.2		
1984[5]	99				328	510	459		321.9	6.8	480.5				

[1] Preliminary. [2] Including bonded warehouses; excludes Gov't stocks; also excludes small tonnages of dealers' stocks. [3] 5 to 35% Mn. [4] Combined value for total Manganese ore & Manganiferous ores. [5] Estimate. *Source: Bureau of Mines* T.386

Manganese Ore (35% or More Mn) Imported[2] into the U.S. In Thousands of Short Tons (Mn Content)

Year	Angola	Zaire	Brazil	Congo (Brazz.)	Canada	Ghana	India	Mexico	Morocco	Gabon	Australia	Turkey	South Africa	Total	Value Mill. $
1975	—	11.4	307.4	—	—	—	—	23.2	—	244.8	86.5	—	92.2	766	77.1
1976	—	2.9	161.1	13.3	—	—	—	18.5	18.7	256.4	117.4	—	61.0	649	73.6
1977	—	14.7	111.6	—	—	—	—	34.9	17.1	245.2	13.8	—	16.9	454	56.4
1978	—	13.2	52.1	9.5	—	—	—	18.4	14.5	127.0	32.6	—	11.0	278.2	33.6
1979	—	—	51.7	22.5	—	—	—	2.1	10.7	49.2	55.3	—	52.1	243.6	27.5
1980	—	—	33.6	—	—	—	—	18.6	5.3	79.9	106.0	—	86.4	329.8	46.4
1981	—	—	38.9	—	—	—	—	25.8	13.6	90.6	34.3	—	97.5	300.7	42.6
1982	—	—	3.0	—	1.7	—	—	1.5	5.0	23.2	18.8	—	57.9	111.1	16.2
1983	—	—	39.1	—	—	—	—	25.6	—	85.5	15.1	—	12.7	178.1	19.9
1984[1]			34.7					16.4	—	66.1	21.0		17.3	155.6	

[1] Preliminary. [2] Imported for consumption. *Source: Dept of Commerce* T.387

United States General Imports[1] of Manganese Ore In Thousands of Long Tons—Manganese Content

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	79	40	108	138	116	84	77	88	51	112	43	98	1,033
1976	101	39	83	68	53	161	45	134	87	75	93	114	1,053
1977	71	53	29	48	121	119	62	87	110	49	21	64	884
1978	94	50	113	50	71	55	82	42	97	62	64	63	842
1979	62	50	60	57	85	122	61	34	85	53	105	76	850
1980	109	56	54	66	97	68	54	67	60	38	57	69	795
1981	22	76	55	70	111	78	68	55	72	51	67	49	775
1982	65	49	65	55	22	58	35	33	14	25	32	15	477
1983	61	29	37	20	38	45	50	28	46	56	39	35	483
1984	39	63	33	64	33	68	46	52	31	37	33		

[1] General imports of ore, concentrates manganiferous ore, manganese alloys & metals. *Source: Department of Commerce* T.388

Production of Ferromanganese in U.S., & Materials Used in Its Manufacture

	Ferromanganese Produced			Silico-Manganese Production (Gr. Wt.) Sh. Tns.	Materials Consumed (Short tons)			
		Manganese Contained			Manganese Ore		Manganese Ore Used Per Ton of Ferro-manganese & Silico-manganese	Ferro-manganese Made
Year	Short Tons	Per Cent	Short Tons		Foreign	Domestic		
1975	575,809	78.9	454,309	143,000	1,389,300	48,011	1.9	2.4
1976	482,662	79.0	381,328	129,000	1,208,336	53,632	2.0	2.5
1977	334,134	78.8	263,136	120,000	889,296	35,769	1.9	2.6
1978	272,530	80.6	219,707	142,000	740,906	90,660	1.9	
1979	317,102	80.2	254,389	165,000	785,664	125,130	1.8	
1980	189,472	79.7	150,982	188,000	691,250	34,877	1.9	
1981	192,690	80.0	154,156	173,000	684,857	57,722	2.0	
1982	119,000	82.0	97,500	69,000	412,000		2.2	
1983[1]	86,000	81.0	109,000	N.A.	283,000		N.A.	

[1] Preliminary. *Source: Bureau of Mines* T.390

Average Price of Ferromanganese[1] (78% Mn-F.O.B. Plant) In Dollars Per Gross Ton—Carloads

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	440	440	440	440	440	440	440	440	440	440	440	440	440.00
1976	432½	432½	432½	432½	432½	432½	432½	432½	432½	432½	425	417½	430.63
1977	417½	417½	417½	399½	399½	399½	399½	399½	399½	399½	399½	399½	404.00
1978	399½	399½	399½	399½	422.17	425	425	425	425	425	425	425	416.26
1979	440	440	440	465	490	490	490	490	490	493.48	510	510	479.04
1980	510	510	510	510	510	510	510	510	510	510	510	510	510.00
1981	510	510	510	510	510	510	510	510	510	510	510	510	510.00
1982	510	510	510	510	510	510	510	510	510	510	510	510	510
1983	510	510	510	510	510	510	510	510	510	510	510	510	510

[1] Domestic standard. *Source: American Metal Mkt.* T.389

Margarine

Salient Statistics of Margarine in the United States   In Million Pounds (Actual Weight)

				Domestic —Disappearance[2]—		Materials Used in Manufacture of Margarine								
Year	Stocks Jan. 1	Production	Exports & Shipments	Total	Per Person in lbs.	Edible Tallow	Cotton seed Oil	Soybean Oil	Peanut Oil	Corn Oil	Lard & Animal Fats	Safflower Oil	All Other Edible Oil	Total Primary & Secondary Fats & Oils
1975	64	2,399	17	2,386	11.0		46	1,568	1	188	52	7	38	1,917
1976	60	2,628	20	2,601	11.9		51	1,671	38	218	44	10	58	2,091
1977	67	2,535	20	2,502	11.4		44	1,585	15	243	80	8	48	2,026
1978	80	2,520	31	2,499	11.2		42	1,593	—	211	74	10	27	1,997
1979	70	2,553	25	2,517	11.2	11	25	1,643	—	222	86	5	12	1,985
1980	81	2,593	24	2,576	11.3	10	25	1,653	—	223	104			2,016
1981	74	2,577	33	2,573	11.2	8	25	1,685		214	78			2,012
1982	61	2,596	31	2,582	11.1		21	1,718		220	29			1,996
1983[1]	62	2,451	27	2,447	10.4		34	1,549		212	41			1,836
1984[3]	56	2,700					40	2,500		238	50			2,700

[1] Preliminary. [2] Civilian & military. [3] Estimate. *Source: Bureau of Census* T.391

United States Production of Margarine   In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	265.1	259.6	225.8	198.8	190.5	199.8	197.4	195.1	202.8	215.6	233.2	246.0	2,630
1977	242.3	236.5	232.7	197.3	178.8	179.8	164.8	198.2	209.1	221.8	229.0	244.7	2,535
1978	219.8	224.6	243.0	186.8	183.7	194.6	166.0	200.6	207.6	222.2	220.6	250.0	2,520
1979	233.1	214.8	242.9	186.8	197.5	193.0	188.3	199.0	205.9	225.8	224.6	241.5	2,553
1980	235.8	228.7	231.6	184.5	200.5	214.6	192.1	186.9	213.2	221.9	218.4	264.6	2,593
1981	235.5	214.4	231.6	196.3	182.1	214.3	184.7	192.5	223.3	220.9	232.6	248.2	2,576
1982	221.5	237.7	236.7	191.8	189.8	206.5	182.3	193.8	229.2	221.8	236.5	248.4	2,596
1983	209.0	221.8	225.1	184.1	192.8	205.5	161.3	192.9	219.4	210.4	202.2	226.7	2,451
1984[1]	215.9	212.4	210.2	197.9	206.1	205.4	159.3	168.4	190.1	229.6	223.8	261.8	2,481
1985[1]	215.3	191.7											

[1] Preliminary. *Source: Bureau of the Census* T.392

Stocks[1] of Margarine in the United States   In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1976	60.1	67.0	82.1	101.1	70.2	71.4	70.8	73.6	80.0	72.4	72.2	69.8
1977	67.2	67.4	70.7	71.8	77.3	91.0	81.0	73.7	68.6	58.9	74.0	70.0
1978	79.9	61.8	70.2	59.3	72.3	63.4	68.8	67.8	60.3	66.0	69.9	58.9
1979	69.5	66.8	82.1	67.5	77.3	75.2	78.3	68.7	77.1	72.7	81.6	64.9
1980	80.5	71.6	80.0	73.2	69.5	62.5	74.7	78.3	60.7	66.1	80.0	71.4
1981	74.2	62.2	68.3	76.8	66.1	74.2	87.0	79.8	87.7	75.4	62.5	64.2
1982	61.0	62.2	66.8	64.3	60.5	67.5	65.0	59.6	68.7	68.4	80.9	83.4
1983	62.1	62.7	64.0	76.5	62.7	62.1	58.2	62.8	58.8	52.3	56.9	66.0
1984[2]	55.5	61.9	79.5	71.3	62.6	61.1	68.0	76.4	64.6	60.9	71.5	75.7
1985[2]	55.1	65.0	65.8									

[1] Producers' and warehouse. [2] Preliminary. *Source: Bureau of the Census* T.393

Average Wholesale Price of Margarine, Yellow, Quarters, F.O.B. Chicago   In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	31.0	31.0	31.0	31.0	30.7	30.0	31.8	30.0	32.0	32.0	33.0	33.0	31.4
1977	33.8	34.0	39.5	42.5	44.3	43.9	42.4	40.3	38.5	37.4	36.9	36.1	39.1
1978	36.6	36.7	41.0	43.6	42.0	40.6	37.8	37.3	41.6	41.3	40.1	39.6	39.8
1979	40.3	41.3	42.3	41.4	40.6	41.1	42.6	42.3	43.9	42.4	37.9	42.1	41.51
1980	39.8	38.3	39.0	35.6	34.8	36.1	40.3	40.0	40.3	39.3	40.3	40.2	38.65
1981	35.8	35.9	37.1	38.2	36.6	37.7	39.4	39.0	37.4	36.9	36.9	36.9	37.33
1982	37.0	37.6	38.3	39.0	40.2	40.0	39.0	38.4	38.0	38.0	38.0	38.0	38.45
1983	38.0	38.0	38.0	38.0	38.0	38.0	38.0	41.2	44.0	42.0	40.5	39.7	39.45
1984	41.5	41.0	42.0	43.2	50.5	50.6	48.9	47.5					

Source: Department of Agriculture T.394

Meats

On a retail weight basis, total red meat and poultry consumption in 1984 reached a record 211 pounds per person, up 1 percent from 1983. In 1984, consumers purchased almost 79 pounds of beef, 62 pounds of pork, and 67 pounds of poultry. Beef and pork consumption were equal to 1983 levels, but poultry consumption rose 2 pounds per person in 1984. In 1985, consumption of broilers alone is expected to increase 3 pounds, coming close to estimated pork consumption.

The increase in poultry consumption affected mainly pork consumption, as the further growth in purchasing power in 1984 allowed consumers to pay higher prices for beef. Retail beef prices rose about 3 percent in 1984, consistent with gains of the last four years. Conversely, retail hog prices declined 5 percent in 1984. Since further gains in consumer purchasing power in 1985 and slight declines in red meat production are expected, moderate price increases are projected for beef and pork in 1985. Only modest declines in price are anticipated for poultry as poultry supplies increase in 1985.

Beef production in 1984 was 23.4 billion pounds, up 2 percent from a year earlier. Cow and nonfed steer and heifer slaughter are expected to decrease in 1985 partly because the dairy diversion program ended on March 31, 1985. Consequently, beef production may decline 2 to 4 percent in 1985, with the largest drop coming later in the year. Choice steer prices, which trended lower in 1984, are expected to recover somewhat in 1985.

Pork production also is expected to decline in 1985. Commerical production in the second half of 1985 is expected to total 7,025 million pounds, down 4 percent from the corresponding period in 1984. Reduced red meat supplies, higher per capita disposable incomes, and less burdensome frozen pork stocks should contribute to higher pork prices in 1985. However, increased poultry production and larger imports of hogs and pork products relative to other meats will continue to dampen the price outlook for hogs.

Federally inspected broiler meat production in 1984 was estimated at 13 billion pounds, up 5 percent from 1983. Strong prices in 1984 and favorable returns to producers encouraged production and will contribute to a 6 to 7 percent expected rise in output in 1985. Falling exports due to the strong dollar and increased production could pressure prices in 1985.

World Total Meat[1] Production In Millions of Metric Tons

Year	Argentina	Australia	Bel.-& Lux.	Canada	Czechoslovakia	Denmark	France	W. Germany	Japan	Italy	N. Zealand	Poland	Brazil	South Africa	Un. Kingdom	United States	U.S.S.R.
1972	2.6	2.4	.8	1.5	.7	.9	3.0	3.6	1.1	1.8	1.0	1.6	2.8	.8	2.1	16.8	10.0
1973	2.6	2.3	.9	1.5	.8	1.0	3.0	3.4	1.1	1.9	1.0	1.8	3.3	.7	2.1	15.8	9.9
1974	2.6	1.9		1.6			3.4	3.8	1.2	2.0		2.0	2.9		2.3	17.1	10.5
1975	2.8	2.4	.9	1.6	.8	1.0	3.4	3.8	1.3	1.7	1.0	2.1	3.0	.8	2.3	16.7	11.0
1976	3.2	2.7	.9	1.7	.8	1.0	3.5	3.9	1.4	1.9	1.2	2.4	3.1	.8	2.1	18.1	10.0
1977	3.3	2.0	.7	1.7	.9	1.0	3.4	3.9	1.5	2.0	1.1	2.3	3.4	.8	2.2	18.0	12.7
1978	3.5	2.8	.9	1.7	1.3	1.1	3.5	4.1	1.7	2.0	1.1	2.7	3.1	.8	2.2	17.5	13.3
1979	3.5	2.5	1.0	1.7	1.3	1.2	3.7	4.2	1.8	2.1	1.1	2.7	3.0	.9	2.2	17.1	13.2
1980	3.3	2.3	1.0	1.9	1.3	1.2	3.7	4.3	1.9	2.2	1.1	2.6	3.2	.9	2.3	17.7	12.6
1981	2	2.2	1.0	1.9	1.3	1.2	3.7	4.3	1.9	2.2	1.2	2.0	3.2	.8	2.3	17.7	12.7
1982[2]	2.6	2.5	1.0	1.9	1.2	1.2	3.5	4.2	1.9	2.2	1.1	2.3	3.4	.9	2.2	17.0	12.6

[1] Production of beef & veal, mutton & lamb, goat meat, & pork. Horsemeat included from 1976. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

T.395

World Per Capita Consumption of Meat[1] (Total Red Meat) In Kilograms

Year	Argentina	Australia	Austria	Canada	Denmark	France	W. Germany	Ireland	N. Zealand	Poland	Switzerland	United Kingdom	United States	Uruguay	U.S.S.R.
1972	74	101	63	73	58	64	67	63	102	47	65	64	88	88	41
1973	79	91	63	71	53	63	65	60	104	49	66	59	81	85	40
1974	87	100	65	73	51	65	67	64	98	74	64	58	87	100	44
1975	99	109	68	73	54	66	67	67	103	73	64	58	83	100	45
1976	101.3	110.2	69.9	79.3	59.8	68.4	69.2	63.6	100.0	66.6	66.2	55.4	88.6	88.8	47.1
1977	101.2	110.1	71.1	76.8	58.7	69.4	69.6	62.4	107.2	65.5	69.5	58.1	87.2	96.8	51.0
1978	105.6	103.4	72.2	73.8	67.2	72.2	72.9	63.0	104.5	58.9	70.0	58.2	84.8	102.9	51.3
1979	103.0	88.3	73.4	71.1	66.9	74.2	74.3	64.9	100.2	57.8	70.2	59.9	81.7	81.5	51.7
1980[2]	103.3	83.8	74.3	73.6	71.0	75.1	75.7	65.9	98.1	56.6	76.8	58.2	83.9	94.0	49.8
1981[3]	103.2	77.7	74.9	72.4	72.1	74.5	75.7	65.9	97.9	48.2	77.9	56.1	80.0	95.1	47.9

[1] Summation of previous individual meat tables plus horse meat. [2] Preliminary. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

T.396

Total Red Meat Imports (Carcass Weight Equivalent[2]) of Importing Countries In Thous. of Metric Tons

Year	Belgium & Lux.	Canada	Czechoslovakia	France	South Korea	W. Germany	Greece	Italy	Japan	Netherlands	Spain	Switzerland	Un. Kingdom	United States	USSR
1975	111.7	151.6	12.3	479.1	*78*	586.0	50.3	588.7	569.8	131.2	71.7	24.7	1,064	1,020	454.1
1976	120.5	249.4	22.0	482.2	*(24)*	614.0	95.0	593.0	692.7	150.0	101.9	26.1	1,132	1,184	274.6
1977	121.2	194.3	21.4	556.2		627.0	110.9	612.9	649.0	175.3	59.2	26.0	1,280	1,100	496.2
1978	143.9	172.9	21.0	630.4		633.0	142.0	632.1	665.4	187.5	112.3	33.8	1,276	1,296	132.0
1979	99	140	21	541	108	648	140	684	610	149	124	25	1,245	1,348	469
1980	91	111	21	590	15	700	134	722	486	168	27	23	1,122	1,210	706
1981	88	110	21	579	45	687	80	690	612	146	16	31	1,072	1,058	786
1982[1]	99	107	21	626	67	680	81	814	555	112	14	25	1,105	1,175	739
1983[3]														1,211	

[1] Preliminary. [2] Excludes fat, offals & live animals. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.397

Total Red Meat Exports (Carcass Weight Equivalent[2]) of Principal Countries In Thousands of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Denmark	France	Ireland	Mexico	Netherlands	N. Zealand	Poland	United States	USSR	Uruguay	Yugoslavia
1975	329.5	943.0	156.2	78.2	700.2	374.8	359.7	17.6	610.9	708.2	161.7	164.0	63.5	124.1	86.8
1976	628.6	1,129	217.0	112.2	634.1	366.8	282.9	28.5	641.0	788.6	117.7	236.4	67.6	201.8	98.5
1977	669.6	1,335	240.0	112.1	695.6	312.2	363.8	34.1	697.2	790.9	131.8	236.0	49.2	134.6	88.0
1978	823.7	1,377	178.1	117.1	753.4	267.2	359.3	46.6	751.6	724.7	141.0	256.6	38.0	118.8	113.4
1979	728	1,306	111	133	832	306	342	7	785	783	155	211	33	84	82
1980	487	1,087	170	182	857	362	453	1	843	796	141	195	35	128	98
1981	508	966	281	207	905	415	324	1	932	817	60	240	53	185	72
1982[1]	546	1,182	348	277	885	409	332	1	861	802	40	213	30	178	102
1983[3]												225			

[1] Preliminary. [2] Excludes fat, offals & live animals. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.398

United States Exports of Livestock & Meat Products In Thousands of Metric Tons

	Red Meats						Byproducts					Live Animals (1,000 Head)			
Year	Beef & Veal	Pork	Lamb, Mutton & Goat	Sausage, Bol. & Frank.	Other Meats[2]	Total	Variety Meats[3]	Saus. Casings (Animal)	Lard	Tallow & Greases	Cattle Parts[4]	Cattle & Calves	Sheep & Lambs	Hogs	Horses, Mules, Etc.
1974	23.0	42.9	1.2	2.4	9.0	78.4	134.2	5.6	73.2	1,218	37.8	204.4	290.7	15.8	66.4
1975	20.7	91.2	1.3	2.2	5.7	121.0	133.2	5.8	39.8	916.0	13.8	195.9	339.2	16.0	36.4
1976	36.6	137.5	1.4	2.5	7.7	185.6	172.2	6.9	81.9	1,076	10.5	204.5	244.5	10.8	37.8
1977	41.5	125.2	1.8	3.4	8.2	180.0	173.1	6.9	82.6	1,319	10.5	107.0	205.1	10.2	23.0
1978	55.3	100.2	1.4	3.7	6.8	167.3	185.8	7.1	54.2	1,228	19.4	122.2	141.8	12.7	43.9
1979	57.4	97.4	.6	3.0	4.7	163.0	168.9	7.2	43.5	1,286	21.6	66.2	125.4	13.4	29.1
1980	59.5	84.2	.6	3.3	7.4	155.0	200.4	7.6	41.9	1,516	17.5	65.6	123.5	16.3	25.7
1981	74.7	100.9	1.0	3.8	7.9	188.3	210.0	7.2	67.9	1,487	14.9	87.8	220.9	24.1	66.9
1982[1]	115.0	97.2	.8	3.4	5.3	213.0	230.3		46.7			57.5	280.6	36.8	
1983[1]	125.3	99.5	.7			225.4						56	220.6	23.3	
1984[1]	151.7	74.3	.9			226.9						71	317.2	14.3	

[1] Preliminary. [2] Canned mainly. [3] Beef, Pork & other byproducts. [4] Excludes furskins. *Source: Foreign Agricultural Service, U.S.D.A.* T.399

Production and Consumption of Red Meats in the United States (*Carcass Weight*)

	Beef			Veal			Lamb & Mutton			Pork (Excluding Lard)			All Meats		
		Consumption			Consumption			Consumption			Consumption			Consumption	
Year	Production Mil. Lbs.	Total Mil. Lbs.	Per Capita Lb.	Production Mil. Lbs.	Total Mil. Lbs.	Per Capita Lb.	Production Mil. Lbs.	Total Mil. Lbs.	Per Capita Lb.	Production Mil. Lbs.	Total Mil. Lbs.	Per Capita Lb.	Production Mil. Lbs.	Total Mil. Lbs.	Per Capita Lb.
1975	23,976	25,397	118.8	873	876	4.1	410	431	2.0	11,503	11,852	55.4	36,762	38,556	180.3
1976	25,969	27,539	127.5	853	853	4.0	371	396	1.8	12,415	12,667	58.6	39,608	41,456	191.9
1977	25,279	27,048	124.0	834	835	3.8	351	370	1.7	13,247	13,202	60.5	39,711	41,455	190.1
1978	24,242	25,998	117.9	599	645	2.9	301	343	1.6	13,393	13,293	60.3	38,576	40,279	182.7
1979	21,262	23,522	105.5	411	450	2.0	282	332	1.5	15,270	15,353	68.8	37,225	39,657	177.8
1980	21,469	23,320	103.4	379	410	1.8	310	345	1.5	16,432	16,574	73.5	38,590	40,648	180.2
1981	22,214	23,756	104.3	415	438	1.9	327	360	1.6	15,716	15,927	69.9	38,672	40,481	177.8
1982	25,366	23,998	104.3	423	457	1.98	356	381	1.65	14,121	14,425	62.7	37,264	39,261	170.6
1983[1]	23,060	24,710	106.4	428	457	1.97	367	388	1.66	15,117	15,369	66.2	38,972	40,924	176.2
1984[2]	23,409	24,885	106.1	477	509	2.17	371	404	1.71	14,718	15,384	65.6	38,975	41,178	175.5

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.* T.400

U.S. Imports of Meats and Meat Preparations In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	179	131	146	125	111	135	148	149	157	135	168	112	1,694
1976	175	117	173	158	170	187	159	151	178	170	134	94	1,868
1977	131	150	143	147	147	135	147	158	167	117	87	212	1,741
1978	138	155	183	202	181	167	161	137	182	184	201	181	2,072
1979	201	184	214	201	190	214	168	141	142	143	188	193	2,178
1980	196	152	166	134	173	154	208	170	133	207	167	191	2,052
1981	171	167	131	155	140	153	162	168	180	167	120	118	1,832
1982	127	106	160	169	167	215	158	234	246	194	124	114	2,015
1983[1]	208	177	170	178	187	176	189	181	171	169	123	104	2,030
1984[1]	180	167	171	198	161	128	209	198	189	226	175	159	2,161

[1] Preliminary. *Source: Dept. of Commerce*

T.401

United States Imports of Livestock & Meat Products In Thousands of Metric Tons

	Red Meats							Byproducts				Live Animals (1,000 Head)			
Year	Beef, Boneless	Canned Corned	Pork	Lamb	Mutton & Goat	Total	Meat for Animal Food	Variety Meats	Lard	Tallow & Greases	Meat Extract	Cattle & Calves	Sheep & Lambs	Hogs	Horses, Mules, Etc.
1975	533.4	24.0	148.4	11.2	.5	762.8	8.0	2.5	—	8.0	.2	389	3.5	29.8	9.2
1976	560.2	45.3	144.0	15.5	.4	838.4	3.7	2.4	—	4.8	.4	984	4.6	45.6	10.0
1977	541.0	34.1	135.3	9.5	.3	784.0	1.3	2.6	—	3.1	.3	1,133	8.5	43.0	11.3
1978	651.1	37.6	157.3	17.2	.2	931.7	1.8	2.5	.2	2.4	.5	1,253	11.2	202.4	19.0
1979	685.5	34.6	163.8	19.4	.4	978.9	1.9	4.7	—	1.1	.6	732	9.5	136.6	16.2
1980	622.6	34.5	196.6	15.0	—	923.1	3.5	4.6	—	2.2	.1	681	20.5	247.3	15.9
1981[1]	524.1	29.4	195.8	14.1	—	823.0	4.1	3.6	—	2.5	.4	659	6.9	145.7	14.2
1982[2]	879.6		277.7	8.5		1,174						1,005	9.3	294.9	
1983[2]	875.9		318.2	8.5		1,211						921	7.1	447	
1984[2]	826.9		432.7	9.1		1,234						753	16.3	1,321	

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

T.402

U.S. Exports of Meat and Meat Preparations In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	57	67	75	65	79	64	70	77	73	76	79	82	864
1976	85	93	114	99	119	109	90	112	110	130	117	128	1,305
1977	100	100	103	113	110	103	112	110	125	106	109	124	1,315
1978	109	101	115	106	108	99	93	119	131	124	119	111	1,338
1979	102	95	117	99	100	124	103	109	119	135	119	155	1,378
1980	101	106	144	132	139	164	145	129	136	165	144	154	1,663
1981	143	141	169	248	189	180	126	144	123	174	154	153	1,847
1982	129	147	124	131	167	147	111	108	112	133	143	115	1,566
1983[1]	114	104	136	133	115	118	121	99	130	127	134	119	1,449
1984[1]	112	104	134	106	114	103	128	119	123	139	121	119	1,422

[1] Preliminary. *Source: Dept. of Commerce*

T.403

Average Wholesale Prices of Meats In Cents Per Pound

	Composite Retail Price										
Year	of Beef (Choice)	of Pork[4]	of Veal	of Lamb (Choice)	Steer Beef Carcass, Choice, Centr. U.S.	Fresh Beef, Steer Carcasses Choice, E. Coast	Lamb Carcasses Choice & Prime (55-65 Lb.) East Coast	Pork, Fresh Loins, (8-14 lbs.) N.Y.	Hams[2] N.Y. Fancy Skinned, Smoked 14-17 Lb.	Cured Pork Cuts, Picnics, (Smoked) 4-8 Lb.[1]	Live Broilers Georgia
1975	154.8	134.6	181.1	167.6	73.18	75.4	95.07	99.28	88.2	60.31	26.9
1976	148.2	134.0	173.3	185.6	61.00	64.4	102.67	97.68	85.5	61.35	24.0
1977	148.4	125.4	175.3	186.8	62.69	66.2	108.73	95.25	86.5	57.03	23.7
1978	181.9	143.6	209.5	219.6	80.43	83.9	120.68	109.15	99.63	70.08	26.0
1979	226.3	144.1	282.3	245.7	101.62	101.1	127.74	107.65	99.38	69.91	26.0
1980	237.6	139.4	309.5	252.7	104.44	104.4	134.98	101.14	88.99	67.01	27.0
1981	238.7	152.4	314.5	252.4	99.84	99.8	127.67	113.70	95.55	68.38	26.5
1982	242.5	175.4	N.A.	N.A.	101.31	101.3	122.15	127.66	111.98	78.19	25.0
1983[3]	238.1	169.8			97.83	97.8	125.86	115.90	75.60		27.0
1984[3]	239.6	162.0			100.11	100.1	131.89	115.73	78.22		31.8

[1] At NY. [2] Prior to 1978 prices are composite averages. [3] Preliminary. [4] Sold as retail cuts (ham, bacon, loin, etc.). *Sources: Bureau of Labor Statistics; Department of Agriculture*

T.404

Average Wholesale Price of Steer Beef Carcass, Choice[1], at Midwest Markets[2] In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	61.36	58.41	59.50	70.20	80.60	85.76	82.82	77.95	79.66	75.62	72.98	73.25	73.18
1976	66.68	62.22	56.97	65.85	63.56	62.45	58.20	57.05	57.24	58.36	60.85	62.52	61.00
1977	60.04	58.92	57.12	60.54	64.44	62.62	63.65	62.49	63.04	65.87	65.47	68.10	62.69
1978	68.74	71.08	74.88	81.43	88.48	85.95	84.81	79.94	81.96	82.14	80.98	84.75	80.43
1979	93.57	97.47	104.59	108.61	108.64	103.56	99.85	94.13	101.91	98.32	103.22	105.53	101.62
1980	102.26	103.70	103.15	99.41	102.00	105.18	110.11	111.96	107.97	105.49	101.44	100.57	104.40
1981	99.80	96.80	94.32	99.68	103.32	106.52	107.3	103.90	102.96	96.02	94.56	93.70	99.80
1982	97.40	101.20	103.80	109.50	115.10	111.20	102.60	100.80	95.50	96.30	92.90	92.62	101.30
1983	94.14	96.55	100.62	107.76	105.00	102.47	97.72	95.01	92.10	91.24	91.57	99.82	97.83
1984	105.74	102.86	105.14	103.50	99.62	98.54	101.26	97.61	94.37	92.38	99.08	101.22	100.11
1985	99.50												

[1] 500–600 pounds. [2] Prior to Oct. 1975 prices are at CHICAGO. *Source: Economic Research Service, U.S.D.A.* T.405

Production[2] (Commercial Slaughter) of All Meats[1] in the U.S. In Millions of Pounds—Carcass Weight

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	3,315	2,880	2,959	3,089	2,873	2,832	2,842	2,860	3,088	3,339	2,978	3,159	36,213
1976	3,267	2,907	3,515	3,109	2,928	3,150	3,048	3,350	3,467	3,497	3,453	3,367	39,060
1977	3,237	3,084	3,551	3,195	3,122	3,298	2,925	3,404	3,354	3,345	3,416	3,241	39,172
1978	3,215	3,045	3,342	3,079	3,269	3,081	2,883	3,274	3,139	3,355	3,345	3,094	38,119
1979	3,280	2,756	3,090	2,879	3,130	2,990	2,958	3,329	2,876	3,556	3,306	3,074	37,225
1980	3,398	3,050	3,099	3,315	3,311	3,089	3,070	3,016	3,221	3,577	3,097	3,349	38,590
1981	3,417	3,014	3,389	3,299	3,071	3,118	3,041	3,044	3,247	3,433	3,185	3,417	38,675
1982	3,152	2,894	3,296	———	9,097	———	———	9,165	———	———	9,659	———	37,266
1983[3]	3,151	2,786	3,269	3,051	3,163	3,299	3,002	3,440	3,435	3,523	3,472	3,383	38,974
1984[3]	3,218	3,092	3,349	3,078	3,409	3,204	3,043	3,360	3,111	3,670	3,323	3,117	38,974

[1] Except for pork production & lard. [2] Represents the total dressed carcass weight of livestock slaughtered under Federal inspection, exclusive of meats from condemned animals. [3] Preliminary. *Source: Agricultural Marketing Service, U.S.D.A.* T.406

Cold Storage Holdings of All[1] Meats in the United States, at End of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1974	868.9	875.4	946.4	995.9	1,011.3	913.8	796.1	725.1	692.0	715.4	754.2	803.2
1975	809.4	793.9	787.4	801.1	725.6	654.0	578.2	518.4	517.5	571.3	667.6	675.2
1976	643.4	652.8	703.1	724.3	740.9	698.1	645.4	597.6	637.7	687.8	725.9	733.3
1977	745.4	759.6	776.4	823.0	802.4	723.4	629.4	568.6	579.0	532.1	565.2	566.6
1978	559.1	571.6	658.4	753.0	759.8	720.6	644.9	581.0	598.1	639.0	715.4	723.6
1979	728.4	710.9	762.5	783.4	797.0	755.0	685.6	580.7	549.1	604.5	656.9	706.2
1980	735.3	712.6	695.4	715.5	706.5	641.9	578.5	514.3	510.0	584.2	678.6	749.6
1981	790.3	782.9	775.9	817.2	795.2	716.6	628.6	538.9	508.6	546.8	552.2	578.2
1982	553.4	524.2	536.0	—	—	503.9	—	—	473.9	—	—	553.8
1983[2]	573.4	571.0	576.3	607.6	619.2	595.5	569.8	543.3	535.3	576.7	667.6	679.3
1984[2]	692.9	707.7	738.1	777.5	818.9	776.3	713.8	627.6	646.2	674.9	681.4	696.0
1985[2]	735.0	709.6										

[1] Includes beef and veal, mutton and lamb, pork and products, rendered pork fat, and miscellaneous meats. Excludes lard. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.407

Cold Storage Holdings of Frozen Beef[1] in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1974	447.8	470.5	456.1	477.1	467.4	461.3	438.0	397.5	375.2	346.8	350.4	359.8
1975	401.9	407.1	385.9	384.6	349.0	308.6	288.1	269.0	258.2	254.4	272.4	320.0
1976	349.8	342.8	355.7	390.6	390.8	399.7	395.3	382.6	362.8	382.4	405.0	429.6
1977	453.5	474.6	475.4	472.9	472.0	447.4	412.6	374.0	350.1	345.8	301.1	291.5
1978	315.6	313.1	318.4	357.2	376.0	388.2	372.3	336.5	315.7	332.2	348.4	388.2
1979	405.4	423.7	405.0	427.4	410.1	411.9	395.7	369.6	324.2	296.7	308.2	321.9
1980	350.3	367.3	357.6	335.1	296.6	277.9	256.5	242.5	228.6	219.7	243.8	279.0
1981	328.2	361.3	347.8	341.5	339.4	328.6	297.5	272.6	245.2	234.9	244.6	232.2
1982	256.7	249.1	223.3	211.9	—	—	189.7	—	—	247.7	—	—
1983[2]	294.4	303.1	307.0	299.1	277.3	265.2	254.0	252.3	267.4	268.2	278.0	316.0
1984[2]	325.0	338.0	332.5	325.7	324.6	312.8	303.2	301.7	290.0	319.6	326.0	340.1
1985[2]	357.7	375.1	352.9									

[1] Includes frozen beef, cured beef, and beef in process of cure. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.408

Mercury

World mine production of mercury in 1984 dropped to an estimated 187,100 tonnes from a revised figure of 188,500 in 1983, according to preliminary data of the U.S. Bureau of Mines. U.S. mine production declined 24 percent in 1984, primarily reflecting the large amount of secondary mercury produced in 1983. Secondary industrial production in 1984 was 65 percent below 1983 output.

U.S. consumption of mercury in 1984 increased 10 percent from the 1983 level, primarily because of a 22 percent increase in demand from battery manufacturers, who account for slightly more than one-half of total consumption. Mercury use in paints, chlorine and caustic soda manufacture, and dental equipment and supplies, declined in 1984. The Bureau of Mines estimates that 1985 U.S. mine production of mercury will increase 5 percent to about 20,000 flasks (76-lb.), and that U.S. apparent consumption will increase to about 60,000 flasks. From a 1983 base, demand for mercury is expected to decrease at an average annual rate of less than 1 percent through 1990.

Estimated U.S. uses of mercury in 1984 were as follows: electrical—64 percent; chlorine and caustic manufacture—14 percent; paints—9 percent; industrial and control instruments—6 percent; and other uses—7 percent.

U.S. imports of mercury in 1984 were double those of 1983, with Algeria and Spain continuing as the major suppliers. The strong dollar was an important factor in the significant increase in 1984 imports, which represented about 47 percent of reported consumption.

The average New York dealer price for primary mercury reached a low of $288.26 per flask in February, and increased to a high of $329.86 in May. Prices later eased into early fall reflecting weak demand coupled with increased imports, but firmed later on increased demand for immediate consumption by the electrical industry. Mercury can be replaced by nickel-cadmium or other battery systems in electrical apparatus, and by solid-state devices in industrial and control instruments.

During 1984, the General Services Administration (GSA) sold 4,593 flasks of mercury and 359,100 pounds of mercuric oxide from the Stockpile. As of December 31, 1984, a total of 174,223 flasks of mercury and 390,902 pounds of mercuric oxide remained in the Stockpile. On October 19, the President signed Public Law 98-525, and the Defense Authorization Act of 1985, authorizing the disposal of 5,000 flasks of mercury and 500,000 pounds of mercuric oxide from the National Defense Stockpile during fiscal 1985.

Stocks of mercury held by consumers and dealers in the U.S. at the end of 1984 were 46 percent smaller than a year earlier, while stocks held by mine producers rose 9 percent.

World Mine Production of Mercury In Flasks of 34.5 Kilograms (76 Pounds)

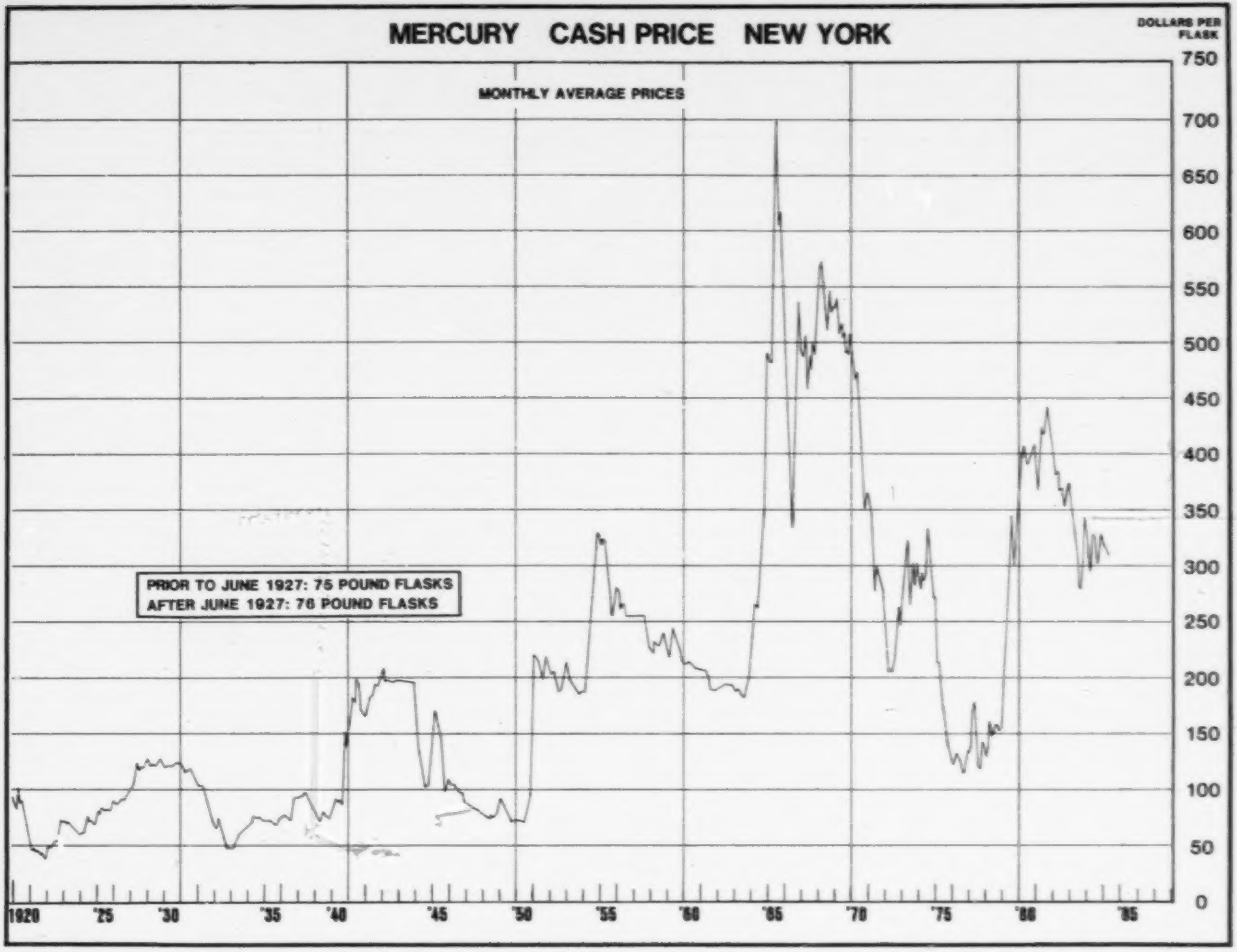
Year	Algeria	Canada	China[1]	Czechoslovakia	Dom. Rep.	Finland	Italy	Mexico	Philippines	Spain	Turkey	United States	USSR[1]	W. Germany	Yugoslavia	World Total
1975	28,000	12,000	26,000	5,900	—	97	31,677	14,214	244	44,010	5,421	7,366	55,000	—	16,941	252,329
1976	30,915	—	18,000	5,540	—	13	22,278	15,026	—	42,729	4,899	23,133	56,000	—	12,503	234,614
1977	30,429	—	20,000	5,309	—	630	406	9,660	—	26,851	4,686	28,244	58,000	2,872	3,133	190,736
1978	30,592	—	20,000	5,686	—	1,145	87	2,205	—	29,588	5,020	24,163	60,000	2,437	—	181,372
1979	14,719	—	20,000	4,960	281	1,348	—	1,973	—	33,275	4,722	29,519	61,000	2,639	—	174,436
1980	24,403	—	20,000	4,612	159	2,170	96	4,206	—	43,038	4,461	30,657	62,000	1,624	—	197,426
1981	25,000	—	20,000	4,438	77	1,949	7,427	6,962	—	46,008	5,927	27,904	63,000	2,205	—	210,897
1982[2]	11,000	—	20,000	4,380	49	1,848	4,612	8,558	—	48,808	7,144	25,760	64,000	1,537	—	197,696
1983[2]	10,000	—	20,000	4,380	40	1,848	—	8,000	—	48,000	3,650	25,070	64,000	2,005	1,500	188,493
1984[1]	10,000							7,000		50,000		19,017	65,000			187,100

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines* T.409

Salient Statistics of Mercury in the United States In Flasks (76 Pounds Each)

Year	Net Import Reliance as a % of Apparent Consumption	Ore Treated (1,000 Short Tons)	Mercury Produced[2]		Production		Stocks, Dec. 31			Exports	U.S. Imports (For Consumption) From:					
			Flasks	Pounds per Ton of Ore	Mine	Secondary	Producers	Consumers & Dealers	Total		Total	Canada	Italy	Mexico	Spain	Japan
1975	69	76.8	6,905	6.8	7,366	8,038	4,858	20,691	25,549	339	43,865	12,891	7,340	2,213	4,575	
1976	62	185.1	23,042	9.5	23,133	3,363	9,494	22,240	31,734	501	44,415	2,853	13,172	1,719	4,824	
1977	44	216.6	28,244	9.9	28,244	6,566	11,275	22,903	34,178	852	28,750	1,708	671	4,668	8,790	
1978	60	256.2	24,144	7.2	24,163	9,262	16,600	22,149	38,749	N.A.	41,693	895	5,913	813	13,923	4,428
1979	59	242.6	29,499	9.2	29,519	15,587	9,181	18,401	27,582	N.A.	26,448	3,943	4,429	403	8,507	7,960
1980	27	356.0	30,623	6.5	30,657	16,806	11,095	21,974	33,069	N.A.	9,416	843	—	989	3,352	3,813
1981	44	262.4	27,888	8.1	27,904	11,244	11,783	15,556	27,339	—	12,408	112	—	104	4,989	2,372
1982	31	301.0	25,704	6.5	25,760	4,473	14,098	15,229	29,327	.0	8,916	5	—	182	1,404	4,345
1983[1]	30	335.4	25,033	5.7	25,070	13,474	18,823	12,695	31,518		12,786	4	500	1,590	3,408	511
1984[3]	60				19,017	4,701	20,462	6,796	27,258		25,327	14	800	21	11,749	500

[1] Preliminary. [2] Excludes mercury produced from placer operation & from clean-up activity at furnaces & other plants. [3] Estimate. *Source: Bureau of Mines* T.412


MERCURY CASH PRICE NEW YORK

Average Price of Mercury in New York In Dollars Per Flask of 76 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	190.80	202.63	224.32	255.00	300.55	343.90	322.34	300.33	313.16	324.13	328.63	362.08	288.99
1980	383.75	399.90	420.00	406.81	398.33	389.57	397.11	397.26	402.62	407.83	404.56	376.19	396.72
1981	366.00	386.79	411.18	423.41	418.50	423.07	433.75	441.14	436.55	425.91	421.84	413.07	416.77
1982	405.00	380.92	390.76	384.32	365.88	367.50	364.29	343.30	352.55	373.21	373.75	374.29	372.98
1983	366.67	346.18	338.91	327.62	316.31	300.23	282.25	279.02	299.05	339.29	344.50	331.69	322.64
1984	317.90	295.68	300.45	324.26	328.27	325.48	314.65	302.09	317.18	329.07	327.13	320.08	316.92
1985	317.30	315.03											

Source: American Metal Market T.410

Mercury Consumed in the United States In Flasks

Year	Batteries	Chlorine & Caustic Soda	Catalysts	Dental Equip.	Electrical Lighting[3]	Electrolytic Prep.	General Lab. Use	Industrial & Control Instrum.	Other Instruments + Relat.	Paints	Wiring Devices & Switches	Meas. & Control Devices	Other	Grand Total
1979	25,299	12,180	1,257	1,422	511	12,180	410	3,603	192	9,979	3,213	3,603	556	62,205
1980	27,829	9,470	765	1,779	1,036	9,470	363	3,049	190	8,621	3,062	3,049	790	58,983
1981	29,441	7,323	815	1,613	1,043	7,323	328	5,671	253	7,049	2,641	5,671	242	59,244
1982	24,880	6,243	499	1,019	826	6,224	281	3,064	194	6,794	2,004	3,064	984	48,943
1983[1]	23,350	8,054	484	1,597	1,273		280	2,465		6,047	2,316	2,465	1,356	49,138
1984[2]	28,393	7,116		1,053	1,174		127	2,453		4,651	2,402	2,453		54,282

[1] Preliminary. [2] Estimate. [3] Data prior to 1980 are for Electrical Apparatus. *Source: Bureau of Mines* T.413

Milk

Early estimates put 1984 worldwide fluid cow's milk production at 407.3 million tonnes compared with 408.6 million for 1983 and with projected 1985 output of 407.8 million. The estimated EC 1984 fluid milk output amounted to 109.2 million tonnes, or about a quarter of the world total. EC milk production was estimated to have declined 2.3 percent in 1984 compared with the previous year because of the effects of the EC's dairy quota system. Delays in implementing the quota system and EC producer uncertainty and skepticism regarding the 5-yr. dairy program were reported. However, the program influenced a rise in EC cow slaughter and a lessened use of feed concentrates. The combined fluid cow's milk production of New Zealand and Australia was estimated at 13.7 million tonnes in 1984, up from 12.6 million in 1983 because of good pasture growth and the enhanced competitive position of New Zealand's producers due to a devaluation of the New Zealand dollar. Australia's 1984 milk output likewise rose because of favorable forage conditions. Due to a summer drought 1984 milk production in the Soviet Union increased by less than 1 percent. However, better cow breeding and technological improvements should help the Soviet Union's milk output in 1985 to rise around 1.5 percent.

A decline in world milk supplies in 1984 contributed to a drop in world non-fat dry milk (NDM) output to 4.6 million tonnes in 1984, 7 percent below a year earlier. NDM production is expected to be further reduced in 1985. Because of greater food aid activity, world exports of NDM continued to increase from 1983's high levels, and the uptrend was expected to continue in 1985. The EC uses considerable quantities of surplus liquid skim milk and NDM for animal feed. Continued lower world production and larger exports are expected to influence substantially reduced ending stocks of NDM in 1985.

Year-over-year gains in U.S. milk production slowed in 1983 due to lower real farm returns for milk and higher feed costs, and production of milk dropped further in 1984. The 1984 output of milk per cow was estimated to be down roughly 0.6 percent because of reduced feedings of concentrated feeds and higher feed costs during most of 1984 as well as by producer management alterations influenced by milk diversion programs. The period from 1981 to 1983 represented the longest period of U.S. dairy herd expansion since 1941 to 1944. However, the U.S. dairy cow herd dropped sharply between November 1983 and July 1984 and showed little change for the remainder of 1984. The decline was attributable to increased culling of cow herds by milk diversion program participants. Even some non-participants likewise reduced dairy cow herds because of reduced profit margins and higher milk production costs. The 1984 dairy cow herd was estimated to have averaged 2.4 percent below the 1983 level. Total U.S. milk production in calendar 1984 was estimated at 136 billion pounds, down 3.9 billion pounds, or 2.8 percent below the 1983 level. In 1985, with the end of the milk diversion program, milk yield per cow could increase and cow numbers could increase slightly. Calendar 1985 milk production is expected to be unchanged to 2 percent above 1984 levels.

On December 1, 1983, the USDA set its support price for milk at $12.60 per cwt. as required by law. This support price could be reduced by 50¢ per cwt. if by April 1, 1985 the Secretary of Agriculture deemed that projected CCC purchases for the next 12 months could exceed 6 billion pounds, milk equivalent. In late March 1984, an order implementing the dairy promotion program was issued and deductions for the program started on May 1. Promotions under the program began on September 1984, but the program must be approved by dairy farmers in order to continue beyond September 30, 1985.

Minimum Class I prices in Federal order milk markets moved up sharply to $14.82 per cwt. in late 1984, influenced by a 34¢ increase in the Minnesota-Wisconsin (M-W) price for manufacturing grade milk. For all of 1984, Federal order Class I prices averaged $14.40 per cwt., 29¢ below the 1983 level. Milk support prices were lowered in April to $12.10 per cwt., effective until September 30, 1985 unless an additional adjustment is made on July 1.

World Fluid Milk Production (Cow's Milk) In Millions of Metric Tons

Year	Australia	Brazil	Canada	Czechoslovakia	Denmark	Finland	W. Germany	USSR	India	Netherlands	New Zealand	France	Poland	Switzerland	United Kingdom	United States
1980	5.6	10.3	7.9	5.9	5.1	3.3	24.8	90.6	15.5	12.0	6.8	26.9	16.7	3.7	16.0	58.3
1981	5.3	10.5	8.0	5.9	5.0	3.2	24.9	88.9	14.0	12.1	6.7	26.8	15.3	3.7	15.9	60.3
1982	5.4	10.1	8.3	5.9	5.2	3.2	25.5	91.0	14.7	12.7	6.8	27.4	15.3	3.7	16.7	61.6
1983[1]	5.7	10.7	8.1	6.5	5.4	3.2	26.9	96.5	16.0	13.2	6.9	27.9	16.1	3.7	17.3	63.5
1984[2]	6.1	10.5	8.1	6.7	5.2	3.2	26.1	97.0	16.3	12.8	7.6	27.6	16.8	3.8	16.1	61.8

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.414

U.S. Milk-Feed Price Ratio[1] In Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	1.54	1.57	1.55	1.55	1.53	1.50	1.47	1.42	1.39	1.42	1.40	1.38	1.48
1981	1.39	1.39	1.41	1.39	1.35	1.36	1.40	1.43	1.48	1.53	1.56	1.54	1.44
1982	1.55	1.53	1.53	1.51	1.46	1.46	1.47	1.49	1.56	1.61	1.62	1.60	1.53
1983	1.58	1.56	1.55	1.49	1.45	1.43	1.45	1.41	1.36	1.39	1.36	1.34	1.45
1984	1.34	1.34	1.33	1.31	1.32	1.31	1.34	1.39	1.48	1.56	1.62	1.59	1.41
1985	1.57												

[1] Pounds of 16% protein ration equal in value to one pound of milk. *Source: Economics & Statistics Service, U.S.D.A.* T.420

MILK

Milk Cows & Cattle and Milk Production in the U.S.

Year	Number of Milk Cows on Farms[2] (Thousands)	Production Per — Milk Cow[3] — Milk — Pounds —	Milk Fat — Pounds —	— Total Milk Production[3] — Quantity Billion Pounds	% of Fat in All Milk Produced	Milk Fat Mil. Lbs.	Milk Sold to — Plants & Dealers — Quantity Billion Pounds	$ Per 100 Lbs.	Milk Sold Directly to — Consumers — Quantity Million Quarts	¢ Per Quart	Milk Utilized Bill. Lbs.	Farm Value of All Milk Mill. $	Per Capita Consumption — in pounds — Milk-Fat Basis	Fluid Milk[4]
1979	10,734	11,492	421	123.4	3.66	4,518	119.4	12.00	698.8	42.3	120.9	14,949	548	232
1980	10,799	11,891	434	128.4	3.65	4,696	124.7	13.00	683.5	45.3	126.2	16,890	544	227
1981	10,898	12,183	443	132.8	3.64	4,843	129.2	13.80	684.7	48.3	130.7	18,447	542	222
1982	11,011	12,306	450	135.5	3.65	4,961	132.2	13.60	604.3	48.1	133.4	18,598	560	216
1983[1]	11,098	12,585		139.7			136.4				137.6		577	215
1984[1]	10,840	12,495		135.4									582	215

[1] Preliminary. [2] Average number on farms during year excluding heifers not yet fresh. [3] Excludes milk sucked by calves & milk produced by cows not on farms. [4] And cream (milk fat basis). *Source: Crop Reporting Board, U.S.D.A.*

T.415

Utilization of Milk in the United States In Millions of Pounds (Milk Equivalent)

Year	Butter from Whey Cream	Creamery Butter[1]	Cheese[6]	Cottage Cheese (Creamed)	Condensed Whole Milk	Evaporated Milk[5]	Dry Whole Milk Products	Frozen Dairy Products[2]	Fluid Consumption Nonfarm	Fluid Consumption Farm[5]	Fed to Calves	Other Mfg. Products[4]
1979	2,810	19,381	31,557	1,028	568	1,752	627	11,679	51,386	1,031	1,437	912
1980	2,998	22,826	33,925	1,016	524	1,594	607	11,926	50,855	943	1,395	909
1981	3,192	24,614	36,546	977	639	1,669	686	11,964	50,215	886	1,418	821
1982[3]	3,365	24,987	38,903	950	704	1,490	758	12,135	49,360	884	1,521	656
1983[7]		25,800	41,000	900	——2,200——		800	12,600	49,700		1,514	700

[1] Excludes whey butter. [2] From milk and cream only. [3] Preliminary. [4] Includes dry cream, malted milk, dry part skim milk, dry ice cream mix. [5] Data includes evaporated & sweetened condensed milk. [6] American & other. [7] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

T.416

Milk Production on Farms in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	9,960	9,281	10,534	10,603	11,243	10,948	10,683	10,409	9,987	10,063	9,623	10,077	123,411
1980	10,320	9,972	10,945	11,024	11,697	11,335	11,075	10,792	10,353	10,461	10,055	10,494	128,525
1981	10,803	10,149	11,519	11,531	12,078	11,552	11,361	11,106	10,625	10,763	10,393	10,890	132,770
1982	11,106	10,361	11,700	11,607	12,191	11,781	11,618	11,370	10,939	11,053	10,644	11,135	135,505
1983[1]	11,443	10,707	12,029	11,956	12,616	12,261	12,046	11,672	11,218	11,400	10,979	11,345	139,672
1984[1]	11,375	10,855	11,723	11,662	12,227	11,720	11,485	11,206	10,777	10,918	10,529	10,967	135,444
1985[1]	11,209	10,566											

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.417

Average Price Received by U.S. Farmers for All Milk[2] (Sold to Plants) In Dollars Per Cwt.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1978	10.20	10.20	10.20	10.10	10.10	10.00	10.10	10.50	10.90	11.30	11.60	11.80	10.60
1979	11.90	11.90	11.80	11.60	11.50	11.50	11.60	12.00	12.30	12.60	12.90	12.80	12.00
1980	12.80	12.80	12.80	12.70	12.60	12.50	12.60	12.80	13.20	13.70	14.00	14.10	13.00
1981	14.10	14.00	13.80	13.70	13.50	13.40	13.40	13.50	13.70	14.00	14.00	14.00	13.80
1982	14.00	13.80	13.70	13.50	13.20	13.20	13.20	13.30	13.60	13.80	13.90	13.90	13.59
1983	13.90	13.80	13.60	13.60	13.30	13.20	13.20	13.30	13.50	13.80	13.90	13.70	13.57
1984[3]	13.60	13.40	13.20	13.10	13.00	12.80	12.90	13.10	13.60	14.00	14.30	14.00	13.42
1985[3]	14.00	13.70	13.50										

[1] Weighted average. [2] Adjusted for seasonal variation. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.418

Farm Price of Milk[1] Eligible for Fluid Market In Dollars Per Hundred Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	10.50	10.50	10.40	10.30	10.30	10.20	10.30	10.70	11.00	11.50	11.80	12.00	10.80
1979	12.00	12.10	11.90	11.80	11.70	11.60	11.80	12.20	12.50	12.80	13.10	13.00	12.20
1980	13.00	13.00	12.90	12.80	12.70	12.70	12.70	13.00	13.40	13.90	14.10	14.30	13.20
1981	14.20	14.20	14.00	13.80	13.70	13.60	13.60	13.70	13.90	14.20	14.20	14.20	14.00
1982	14.10	14.00	13.80	13.60	13.40	13.30	13.40	13.40	13.70	13.90	14.10	14.10	13.80
1983	14.00	14.00	13.80	13.70	13.50	13.30	13.30	13.50	13.70	13.90	14.10	13.90	13.70
1984	13.80	13.50	13.40	13.20	13.10	13.00	13.10	13.30	13.80	14.10	14.40	14.20	13.60
1985	14.20	13.90	13.70										

[1] MILK, Standard Grade, 3.5% milkfat. Weighted average price per 100 pounds (f.o.b. city). *Source: Crop Reporting Board, U.S.D.A.* T.419

Molasses

Global industrial molasses production in 1984/85 recovered slightly from the poor year of 1983/84 when unfavorable weather reduced both the sugar and molasses output. Preliminary USDA estimates placed 1984/85 world production of molasses at 33.4 million tonnes, up from 32.7 million produced in 1983/84. The largest increases were anticipated in the EC, Africa, and Asia, while in other regions only slight changes were expected. EC production increased to 3.4 million tonnes from 3.1 million in 1983/84.

Brazil, the leading molasses producer, is expected to record output in 1984/85 of 5 million tonnes, a decrease from 5.1 million in 1983/84. Exports from Brazil in 1984/85 are expected to be lower than 1983/84 as domestic use increases and production declines. Brazilian exports in 1984/85 are pegged at 400,000 tonnes, down from 609,000 in 1983/84. The USSR is anticipated to be the second largest producer in 1984/85, with output placed at 2.7 million tonnes, up from 2.6 million in 1983/84. India's production will be 2.4 million tonnes in 1984/85, the same amount recorded in 1983/84, but down sharply from production of 3.7 million in 1982/83.

U.S. imports in 1984/85 were estimated at 1.5 million tonnes, up from 1.35 million in 1983/84. For calendar year 1984, U.S. imports of inedible molasses in 1984 totalled 1.37 million tonnes, down 17 percent from 1.65 million in 1983.

World Production of Molasses (Industrial) In Thousands of Metric Tons

Crop Year	Argentina	Brazil	Cuba[2]	France	W. Germany	India	Italy	Mexico	Philippines	Poland	Australia	Thailand	United Kingdom	United States	USSR	World Total
1975-6	557	2,400	1,364	1,013	842	1,700	330	1,227	1,050	642	620		255	1,813	2,735	27,244
1976-7	557	3,000	1,391	1,087	831	2,059	330	1,076	940	670	642		310	2,235	2,700	29,296
1977-8	599	5,400	1,436	1,050	781	2,971	340	1,340	808	656	642		100	2,195	3,242	33,530
1978-9	818	5,000	1,296	952	685	2,564	365	1,410	818	657	577		103	2,148	3,306	32,688
1979-0	789	4,800	1,185	958	653	1,582	390	1,260	818	653	598		350	2,054	3,062	30,052
1980-1	654	5,400	1,111	1,013	657	2,129	410	1,145	860	430	713		360	2,012	2,669	30,941
1981-2	565	4,520	1,200	1,404	836	3,400	500	1,373	941	665	719	1,736	350	2,051	2,385	34,384
1982-3	541	5,110	1,050	1,364	807	3,700	370	1,270	957	758	726	1,316	450	1,900	2,530	35,139
1983-4[1]	556	5,130	1,150	1,050	589	2,400	380	1,340	845	765	718	1,112	360	2,015	2,600	32,655
1984-5[3]	580	5,000	1,150	1,100	700	2,400	370	1,380	760	696	750	1,200	375	2,015	2,650	33,444

[1] Preliminary. [2] Includes hi-test molasses. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.421

Salient Statistics of Industrial Molasses in the United States In Millions of Gallons

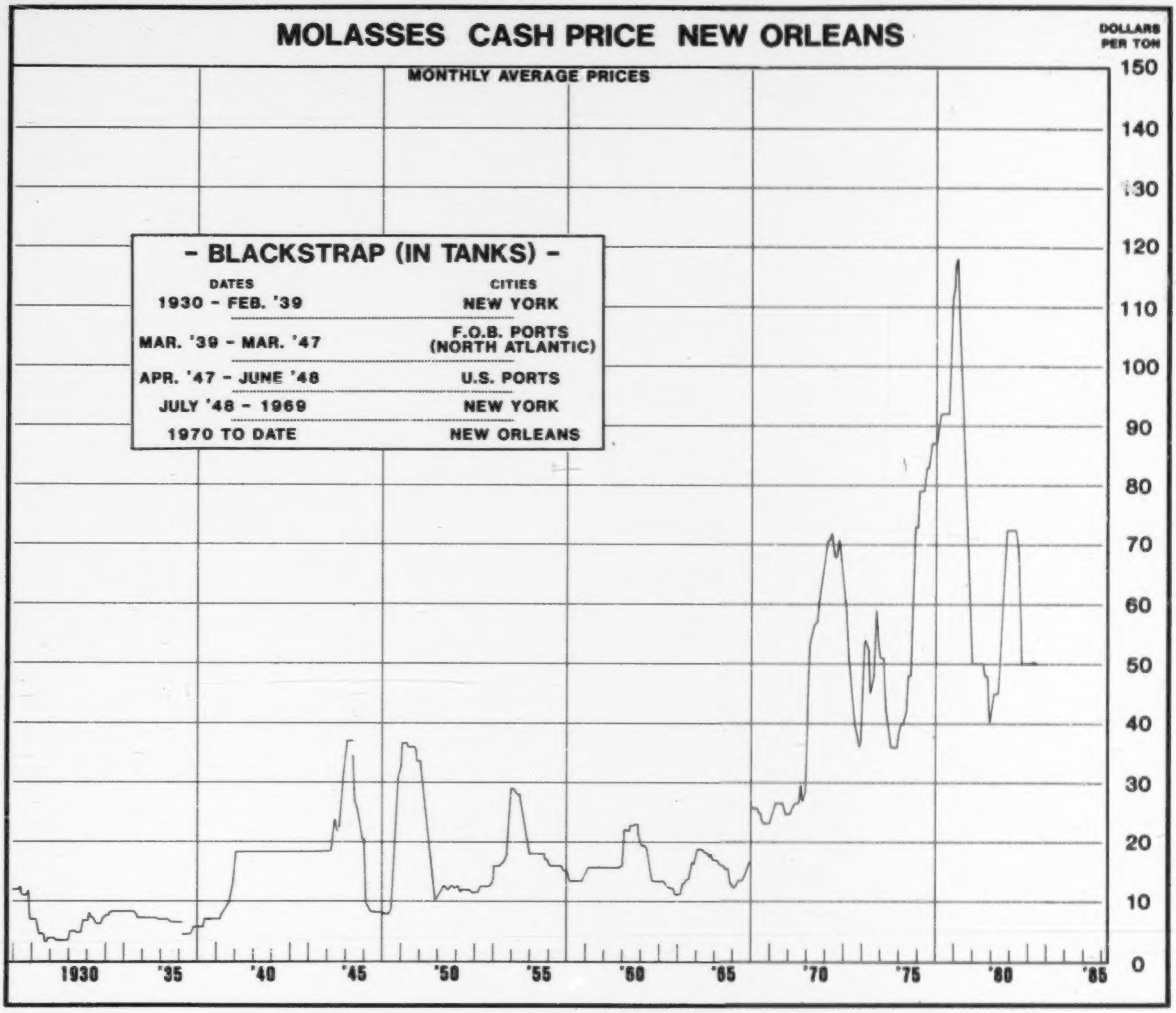
	Production in Mainland Areas									Domestic Utilization					
Year	Mainland Cane	Domestic Beet	Refiners' Blackstrap	Citrus	Hydrol	Total	Imports	Total Available Supplies	Exports	Distilled Spirits	Pharmaceuticals & Other Edibles	Yeast, Citric Acid & Vinegar	Total Industrial	Livestock Feeding[2]	Total Utilization
1974	102.1	155.9	45.0	10.6	23.5	337.1	384.3	755.3	12.6	18	59	100	175	559	739
1975	125.4	188.2	45.0	10.2	24.5	393.3	303.3	739.6	6.3	18	59	100	175	559	739
1976	131.7	158.0	50.3	5.8	37.0	382.9	411.2	829.7	11.2	6.9	60.0	100.5	167.4	572.2	740
1977	114.3	167.1	50.7	5.2	39.7	377.0	347.6	743.9	22.9	3.5	48.2	100.9	152.6	665.8	818
1978	106.7	140.2	44.6	4.3	41.7	337.5	271.0	639.8	20.3	7.4	25.6	92.7	125.7	618.2	744
1979	107.4	164.6	39.0	3.5	40.3	326.1	231.7	596.0	19.3	8.8	19.3	77.7	105.8	519.0	624.8
1980	109.7	113.3	34.7	6.3	39.7	303.7	140.3	468.8	23.7	8.2	18.8	77.5	104.5	364.3	468.8
1981	129.5	147.8	47.8	6.1	19.5	350.6	195.9	581.9	17.8	4.9	19.1	75.2	99.2	425.6	524.8
1982[1]	127.0	170.8	38.2	3.7	10.4	350.0	203.7	556.7	47.2						
1983[1]	127.6	167.5	31.5	5.1	9.1	340.8	276.5	657.6	14.1						

[1] Preliminary. [2] Residual. *Source: Agricultural Marketing Service, U.S.D.A.* T.422

U.S. Annual Average Prices of Molasses, by Types (F.O.B. Tank Car or Truck) In Dollars Per Ton[1]

	Blackstrap						Beet Molasses			Citrus Molasses
Year	New Orleans	South Florida	Baltimore	Minneapolis	Omaha	Calif. Ports	Colorado	Wyo. & Montana	Ore., Utah & Idaho	Florida
1974	68.37	67.40	72.25	88.63	88.37	70.82	78.65	78.65	71.26	45.81
1975	45.32	45.63	51.37	62.75	63.81	50.03	55.80	61.81	59.70	41.97
1976	52.07	51.41	57.60	72.28	70.46	52.96	66.87	65.02	61.79	39.52
1977	40.55	42.52	47.08	54.62	58.84	42.96	41.76	45.41	55.10	50.65
1978	51.50	52.40	59.25	67.30	72.55	54.00	60.40	58.35	60.95	61.05
1979	82.95	85.50	91.20	107.90	107.75	84.05	85.30	82.65	N.A.	79.40
1980	96.50	96.80	106.75	124.45	128.85	101.70	95.60	96.55	N.A.	103.65
1981[2]	84.90	90.00	99.30	111.20	119.40	89.20	85.30	95.20	N.A.	103.10

[1] Per ton prices are based on 171 gallons for blackstrap, beet and corn molasses and on 175 gallons for citrus molasses. Prices represent sales F.O.B. terminal to the general feed trade and do not include sales made under various pricing arrangements above or below prices generally available to the ultimate user. Ton—2,000 lbs. Gallon—U.S. gallon. Prices are now rounded off to the nearest 5 cents. [2] Preliminary. *Source: Molasses Market News, Annual Summary, AMS, U.S.D.A. Denver Colorado, and Molasses Market News, Weekly, various issues* T.423



MOLASSES CASH PRICE NEW ORLEANS

MONTHLY AVERAGE PRICES

Wholesale Price of Blackstrap Molasses (Cane) at New Orleans In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	24.20	24.60	25.00	26.50	26.50	26.50	26.50	26.50	25.60	25.20	24.80	24.80	25.56
1972	24.80	24.80	26.00	26.50	26.50	26.50	26.60	29.60	26.90	27.40	28.40	32.40	27.20
1973	43.20	48.90	53.40	55.20	56.40	57.00	57.00	60.10	60.80	64.20	65.50	67.75	57.45
1974	68.80	70.50	71.00	72.00	69.50	68.00	68.00	69.25	70.40	67.00	64.00	62.00	68.37
1975	60.00	57.75	51.30	50.00	46.00	43.00	41.00	39.00	38.00	36.00	37.00	46.00	45.42
1976	53.00	54.00	53.00	52.00	45.00	47.00	48.00	54.00	59.00	57.00	52.00	51.00	52.08
1977	51.00	51.00	48.00	42.00	40.00	38.00	36.00	36.00	36.00	36.00	36.00	38.00	40.67
1978	40.00	40.00	40.00	41.00	42.00	46.00	48.00	48.00	56.00	65.00	73.00	73.00	51.08
1979	79.00	79.00	79.00	79.00	81.00	83.00	83.00	85.00	87.00	87.00	87.00	87.00	83.00
1980	89.90	91.50	92.00	92.00	92.00	92.00	92.00	92.00	94.40	103.50	111.60	113.00	96.40
1981	116.75	118.00	115.00	103.00	95.50	88.00	83.00	71.60	67.50	58.75	52.00	50.00	76.30
1982	50.00	50.00	50.00	50.00	50.00	50.00	50.00	48.00	48.00	44.00	40.00	41.00	47.60
1983	44.00	45.00	45.00	45.00	47.50	49.40	53.75	61.50	68.75	72.50	72.50	72.50	56.45
1984	72.50	72.50	72.50	72.50	70.70	68.75	59.00	50.00	50.00	50.00	50.00	50.10	61.55
1985	50.00	50.00	50.00										

Source: Economics Service, U.S.D.A.

T.424

Molybdenum

World mine production of molybdenum (contained molybdenum) increased about 48 percent over the 1983 level, according to a preliminary estimate of the U.S. Bureau of Mines. Around one-half of world output comes from deposits mined primarily for molybdenum, with the rest largely obtained as a byproduct of large, low-grade copper deposits. The U.S. is, by far, the world's largest producer, accounting for about 48 percent of the total, followed by Chile with 17 percent and the centrally planned economies with 15 percent.

Molybdenum is a refractory metallic element used primarily as an alloying agent in steels, cast irons, and as superalloys to enhance hardenability, strength, toughness, and wear and corrosion resistance. Molybdenum is added principally in the form of molybdic oxide or ferromolybdenum.

U.S. production of molybdenum concentrate (contained molybdenum) increased 305 percent in 1984, domestic shipments increased 232 percent and exports 164 percent. Consumption was up 203 percent in 1984 versus 1983, and ending stocks at mine and plant were up 126 percent. Increased mine output of molybdenum in 1984 was due to the reopening of mines that had been shut down in 1983. The Bureau of Mines estimates 1985 U.S. production of molybdenum to be around 110 million pounds.

Total reported U.S. end use of molybdenum in 1984 increased 30 percent, according to preliminary data of the U.S. Bureau of Mines. Iron and steel producers accounted for about 75 percent of the molybdenum consumed in 1984. Major end use applications were: machinery—35 percent; oil and gas industry—20 percent; transportation—15 percent; chemicals—15 percent; electrical—10 percent; other uses 5 percent. The Bureau of Mines estimates 1985 domestic consumption of molybdenum at 45 million pounds. From a 1983 base, U.S. demand for molybdenum is expected to increase at an average annual rate of 0.8 percent through 1990. Foreign demand is expected to increase at a greater rate, about 3.3 percent. Exports from the U.S. should continue to supply a large share of world demand.

U.S. exports of molybdenum ore and concentrate, including roasted concentrate (contained molybdenum) rose 34 percent in 1984. Major export destinations were the Netherlands, which accounted for 55 percent of the total, the United Kingdom, Japan, West Germany, and Belgium-Luxembourg.

U.S. producer stocks of molybdenum in concentrate, oxide, and other product forms amounted to 36.8 million pounds at the end of December 1984 versus 40.0 million at the beginning of the year. There is no U.S. Government stockpile of molybdenum.

U.S. dealers quoted molybdenum oxide within a range of $3.65–$4.10 per pound of contained molybdenum and ferromolybdenum for export at $4.45–$4.85 per pound during January 1984. Domestic dealers in December 1984 quoted molybdenum oxide at $2.70–$3.05 per pound and ferromolybdenum for export at $3.60–$3.70 per pound.

World Mine Production of Molybdenum In 1,000 Pounds (Contained Molybdenum)

Year	Canada (shipments)	Australia	Bulgaria	Chile	USSR	Japan	South Korea	China	Mexico	Norway	Philippines	United States	Peru	World Total
1977	36,526	0	330	24,112	21,400	401	223	3,300	2	—	—	122,408	1,005	209,707
1978	30,739	—	330	29,092	21,800	163	485	4,440	24	—	121	131,843	1,607	220,604
1979	24,634	—	330	29,895	22,500	154	417	4,400	105	—	311	143,967	2,637	229,350
1980	26,211	—	330	30,133	22,900	123	661	4,400	163	—	201	150,686	5,926	241,734
1981	31,160	—	330	33,863	23,600	163	1,025	4,400	992	—	207	139,900	5,485	241,125
1982[1]	30,779	—	330	44,198	24,300	214	796	4,400	11,442	—	126	84,381	6,378	207,344
1983[2]	23,100	—	330	33,100	24,300	210	880	4,400	11,700		90	33,951	5,800	137,861
1984[2]	18,100			35,300					13,300			103,478	7,000	204,000

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.425

U.S. Salient Statistics of Molybdenum In Thous. of Pounds (of Contained Molybdenum)

	Concentrate							Primary Products[3]							
		Shipments						Net Production				Shipments			
Year	Production	Total (Includes Exports)	Value Mill. $	For Exports	Consumption	Imports for Consumption	Stocks Dec. 31[2]	Grand Total	Molybdic Oxide[4]	Molybdenum Metal Powder	Sodium Molybdate	To Domestic Destinations	For Exports	Consumption	Producers' Stocks Dec. 31
1976	113,233	114,527	333.5	30,935	84,966	2,093	9,390	83,970	65,743	3,839	1,132	99,144	31,796	50,448	13,210
1977	122,408	124,974	450.4	29,666	91,041	1,976	9,161	90,520	68,671	4,142	1,275	100,626	33,332	54,557	10,141
1978	131,843	130,694	608.0	31,183	96,375	2,705	8,980	96,052	83,220	4,194	1,489	105,921	35,353	61,091	7,996
1979	143,967	143,504	871.1	36,405	103,152	2,329	9,520	101,752	79,035	4,946	1,541	109,419	35,773	60,388	8,502
1980	150,686	149,311	1,344	35,026	108,206	1,825	18,101	106,284	84,554	4,904	1,142	95,391	35,557	53,265	27,007
1981	139,900	118,916	945.5	32,735	80,725	1,988	35,043	105,824	59,645	3,513	96	64,368	20,004	50,189	44,961
1982	84,381	76,135	504.1	21,870	49,444	3,115	38,510	65,381	35,354	3,304	121	47,884	23,375	27,665	49,402
1983[1]	33,951	49,163	167.2	9,341	27,014	1,121	11,637	37,533	11,148	3,667	191	49,587	19,686	27,225	28,323
1984[5]	103,487	100,492		31,215	54,843		14,613	50,000	40,186	4,302		65,000		31,902	22,000

[1] Preliminary. [2] At mines & at plants making molybdenum products. [3] Comprises ferromolybdenum, molybdic oxide, & molybdenum salts & metal. [4] Includes molybdic oxide briquets, molybdic acid, & molybdenum trioxide. [5] Estimate. *Source: Bureau of Mines* T.426

Nickel

World production of nickel in 1984 was about 1 percent above 1983 output, according to a preliminary estimate of the U.S. Bureau of Mines. The USSR accounted for 25 percent of production, followed by Canada with 19 percent and Australia with 14 percent. The only U.S. integrated nickel producer, the Hanna Mining Company, reopened its mine and smelter in Riddle, Oregon after an 18-month shutdown, but U.S. mine production remains insignificant, primarily because of low-grade ore.

The U.S. continues to rely heavily on imports of nickel. In 1984, imports were 16 percent above the 1983 total. Most of the imports were in the form of unwrought nickel. The major suppliers were; Canada—41 percent; Australia—14 percent; Botswana—12 percent; and Norway—11 percent.

Reported domestic consumption of nickel rose 12 percent in 1984 compared to 1983, aided by further improvement in the stainless steel industry. Major consumption occurred in the production of stainless and alloy steel—44 percent; nonferrous alloys—34 percent; and electroplating—18 percent. Major end uses were: transportation—24 percent; chemical industry—16 percent; electrical euipment—11 percent; and construction—9 percent.

The Bureau of Mines estimated 1985 domestic mine production of nickel at 10,000 tons, with apparent consumption 230,000 tons. From a 1983 base, demand for primary nickel is expected to increase at an average annual rate of about 2.5 percent through 1990.

Nickel is a strategic and critical metal, with its greatest value in alloys with other elements where it adds strength and corrosion resistance over a wide range of temperatures. As of November 30, 1984, the National Stockpile goal was 200,000 tons and inventory only 32,209 tons. In late 1984, two companies were awarded contracts totaling 5,000 tons of vacuum-grade nickel for the stockpile—the first GSA purchase since 1960.

Ending stocks of nickel in the U.S. were estimated to be about 6 percent larger than at the end of 1983.

World Mine Production of Nickel In Thousands of Short Tons of Contained Nickel

Year	Australia[3]	Philippines	Canada	Cuba	Finland[3]	Indonesia	Brazil	Domin. Repub.	Zimbabwe	N. Caledonia	Greece	Botswana	South Africa	USSR	United States	World Trade
1978	90.8	32.5	141.4	36.7	7.9	34.6	4.0	15.8	17.3	71.8	20.4	17.7	31.6	164.0	13.5	725.4
1979	76.8	36.7	139.4	34.3	6.4	41.1	3.3	27.7	16.1	88.2	22.2	17.8	33.3	166.0	15.1	756.5
1980	81.9	51.9	203.7	40.3	7.2	58.7	4.7	18.0	16.6	95.5	16.8	17.0	28.3	170.0	14.7	859.4
1981	82.1	32.2	176.6	42.5	7.6	53.8	7.5	20.6	14.4	86.1	17.2	18.2	29.1	174.0	12.1	802.6
1982[1]	97.6	22.9	97.8	39.8	6.9	60.6	7.7	6.6	14.7	66.3	16.8	19.6	24.3	182.0	3.2	705.1
1983[2]	99.2	20.9	134.3	41.2	6.6	51.4	7.9	22.3	12.1	69.4	16.5	19.3	22.6	187.0	—	759.3
1984[1]	110.0	10.0	148.0	42.0		52.0				45.0		20.0	23.0	190.0	7.5	768.0

[1] Preliminary. [2] Estimate. [3] Content of nickel sulfate and concentrates. *Source: Bureau of Mines* T.427

Salient Statistics of Nickel in the United States In Short Tons

		Production		Nickel Consumed[1], By Uses										Stocks, Dec. 31	Nickel & Pdt's (Gross Weight)		
Year	Net Import Reliance as a % of Apparent Consumption	Primary	Secondary	Alloy Steels	Cast Irons	Copper Base Alloys	Magnet Alloys	Electroplating Anodes	Nickel Alloys	Stainless & Heat Resisting Steels	Super Alloys	Chemicals	Total All	At Consumers' Plants	Imports	Exports	Avg. N.Y. Price Free Mkt. $ Lb.
1978	80	11,298	12,304	17.2	4.3	7.0	.8	27.3	39.6	60.5	15.7	1.9	180,723	20,443	234,352	36,293	
1979	75	11,691	13,201	20.2	4.7	8.5	.7	28.5	41.1	69.6	17.6	1.2	196,293	19,518	177,205	50,810	
1980	76	11,225	11,338	16.9	4.0	8.8	.5	18.8	27.4	54.7	19.2	1.5	156,299	15,231	189,188	56,675	2.85
1981	75	10,305	11,696	16.5	3.7	10.6	.5	22.3	10.6	50.6	13.5	2.0	144,851	22,508	209,008	46,836	2.67
1982	76	3,456	8,557	10.0	1.9	4.3	.4	20.9	17.9	32.2	11.0	2.0	103,981	18,853	129,787	57,029	2.24
1983[2]	75	N.A.		9.8	1.1	6.3	.6	22.6	24.9	47.0	11.5	2.0	127,845	20,448	152,333	43,913	2.20
1984[3]	74	8,000		8.7	.7	5.2	.2	24.8	27.9	40.9	9.7	1.4	143,758	35,325	179,874	50,600	2.25

[1] Exclusive of scrap. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines* T.428

Average Price of Nickel (Spot Cathode Sheets, Duty Paid, F.O.B. Refinery)

In Cents Per Pound—In Carload or Truckload Lots

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	196.5	205.0	205.0	242.5	272.5	305.0	302.5	302.5	302.5	302.5	302.5	315.0	271.2
1980	325.0	325.0	350.0	350.0	350.0	350.0	350.0	350.0	305.0	305.0	305.0	305.0	345.8
1981	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	339.5	349.2
1982	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0
1983	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0
1984	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0	329.0

Source: Bureau of Labor Statistics (1022-0128) T.429

Oats

U.S. production of oats in 1984 totaled 472 million bushels, 1 percent less than in 1983 and one of the smallest crops on record. Seeded acreage totaled 12.4 million acres vs. 20.3 million in 1983 when oats were used extensively as a cover crop for the PIK program. Acres abandoned and used for purposes other than grain accounted for 34 percent of the planted acres in 1984 vs. 55 percent of the 1983 crop. In the major producing states (Iowa, Minnesota, and South Dakota), planting was delayed due to cool, wet weather but conditions improved later and planting was completed on time. Development was good in the major growing areas and had peaked before the drought condition in North Dakota. Harvest conditions were generally favorable and progressed ahead of normal. The 10 percent reduction in harvested acreage was almost offset by the record-high average yield of 58.1 bushels per acre harvested for grain.

Total U.S. supply for the 1984/85 (June–May) oat season was about 5 percent less than in the previous season. Imports, once again, were estimated to be sizable, around 35 million bushels versus 30 million in 1983/84, influenced in part by the strong U.S. dollar. The small oat supply, coupled with ample supplies of corn and hay, and fewer cows milked, was expected to result in a 5 percent drop in total oat use in 1984/85. In early March 1985, the USDA projected a 1984/85 carryover on May 31, 1985 of 167 million bushels, about 8 percent smaller than a year earlier. In February 1985, the USDA reported prospective 1985 plantings of 12.9 million acres, up 4 percent from a year earlier.

Indicated use of oats in the June–September 1984 period was 6 percent below the year-earlier period. October–December 1984 use was off 8 percent from the same period of the previous season, influenced in part by shifting feedgrain availabilities and price relationships, principally corn and sorghum. Oats are a preferred ingredient for horses and mules, and dairy farmers usually prefer to include some oats in the rations of breeding animals and young stocks for the high fiber content. In most livestock feeds other grains are preferred because oats are low in starch content.

U.S. Government Support Program

The 1985-crop national average loan rate for oats is $1.31 per bushel, and the target price $1.60 per bushel, both unchanged from 1984 supports.

Futures Markets

Oat futures are traded on the Chicago Board of Trade and also on the Winnipeg Commodity Exchange.

World Production of Oats In Thousands of Metric Tons

Crop Year	Argentina	Australia	Canada	China	Denmark	France	Netherlands	Poland	Spain	Sweden	Turkey	United States	USSR	Un. King.	W. Germany	World Total
1975–6	433	1,141	4,466		367	1,948	158	2,920	609	1,345	390	9,551	12,495	795	3,445	47,044
1976–7	530	1,073	4,831		256	1,402	103	2,695	505	1,251	400	7,930	18,113	764	2,497	48,744
1977–8	570	991	4,303	1,515	288	1,928	94	2,561	421	1,416	370	10,901	18,407	790	2,714	51,508
1978–9	676	1,763	3,621	1,500	206	2,203	140	2,492	553	1,550	370	8,730	18,507	706	4,049	51,753
1979–0	522	1,411	2,978	1,600	163	1,845	109	2,186	456	1,524	370	7,643	15,200	542	3,697	45,165
1980–1	433	1,128	3,028	1,800	160	1,927	94	2,245	680	1,567	355	6,652	15,544	601	3,249	44,543
1981–2	339	1,619	3,188	1,700	175	1,774	115	2,731	445	1,816	325	7,391	15,000	620	3,200	45,346
1982–3[1]	524	800	3,776	1,800	177	1,726	136	2,621	474	1,658	315	8,602	15,500	590	3,777	48,308
1983–4[2]												6,923				

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A* T.434

United States Official Oat Crop Production Reports In Thousands of Bushels

Year	July 1	Aug. 1	Sept. 1	Dec.	Final	Year	July 1	Aug. 1	Sept. 1	Dec.	Final
1977	707,074	757,589	758,669	747,914	752,774	1981	528,118	522,408	509,457	508,083	509,167
1978	635,551	636,785	595,879	601,477	581,657	1982	580,288	591,478	599,008	616,981	620,509
1979	509,761	530,967	531,232	534,386	526,551	1983	519,002	504,201	472,541	477,303	476,961
1980	449,504	440,655	450,660	457,593	458,263	1984	454,747	455,190	472,460	471,921	

Source: Crop Reporting Board, U.S.D.A. T.431

OATS

Production of Oats in the United States, by States In Millions of Bushels

Year	Illinois	Indiana	Iowa	Michigan	Minnesota	Missouri	Nebraska	New York	No. Dakota	Ohio	Pennsylvania	So. Dakota	Texas	Wisconsin	California
1979	15.6	6.4	63.0	18.9	84.9	2.0	21.2	18.0	37.0	20.3	18.4	94.4	16.8	55.9	4.1
1980	14.0	5.9	62.0	20.1	82.7	2.0	15.6	17.9	13.5	19.4	19.0	66.0	12.6	58.7	4.3
1981	13.5	5.5	59.5	21.1	90.1	4.6	15.8	17.9	44.2	17.0	20.0	70.5	18.9	52.6	3.6
1982	11.8	6.7	54.2	28.4	97.9	3.3	26.7	18.2	55.7	23.5	19.8	123.5	10.7	49.3	3.4
1983	12.6	4.6	38.3	15.6	77.0	2.5	13.6	11.4	63.6	15.4	16.2	79.2	24.0	45.1	2.9
1984[1]	10.7	5.0	47.4	21.7	78.0	1.6	15.0	10.4	50.0	13.2	16.0	86.8	8.8	53.8	3.5

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.437

Oats Supply and Utilization in the United States

Crop Year Beginning June 1	Acreage Planted	Acreage Harvested	Yield	Production	Total supply[2]	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price[3]	Nat. avg. supp. rate
	—Mil. acres—		Bu/acre	—Mil. bu—							—$/bu.—	
1980/81	13.4	8.7	53.0	459	696	432	74	13	520	177	1.79	1.16
1981/82	13.6	9.4	54.2	510	688	453	76	7	536	152	1.89	1.24
1982/83[1]	14.0	10.3	57.8	593	748	441	85	3	529	220	1.48	1.31
1983/84[1]	20.3	9.1	52.6	477	727	466	78	2	546	181	1.69	1.36
1984/85[1]	12.4	8.1	58.1	472	674	401	80	3	484	190	1.70	1.31
1985/86[1]	12.9											

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.430

Quarterly Supply and Distribution of Oats in the United States In Millions of Bushels

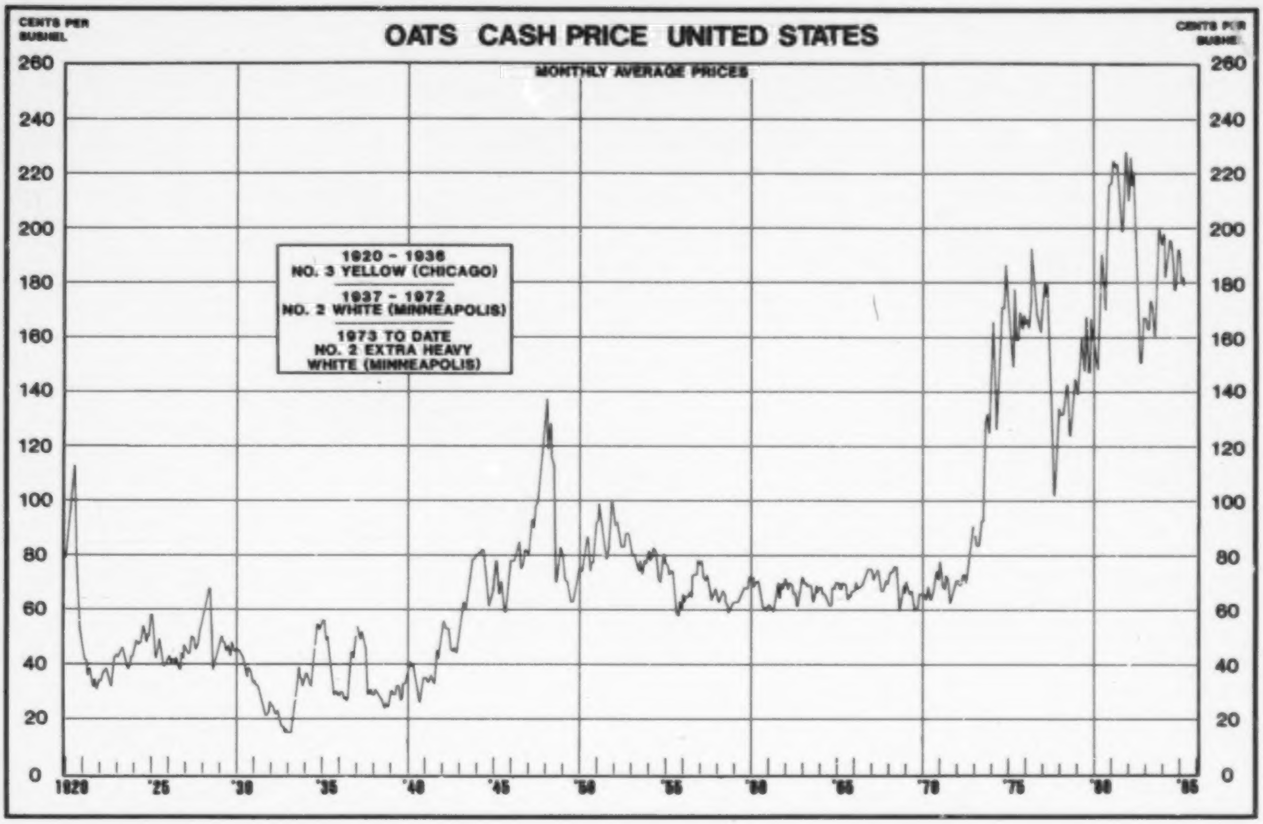
Year & Periods Begin. June 1	Supply				Disappearance							Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Bever.	Seed	Feed	Total	Exports	Total Disap.	Gov't. Owned[2]	Privately Owned[3]	Total Stocks
1981-2	177.0	509.5	1.6	688.1	41.2	—	35.4	453.0	529.6	6.6	536.2	.7	151.2	151.9
June-Sept.	177.0	509.5	.3	686.8	16.0	—	2.0	207.2	225.2	3.2	228.4	1.7	456.7	458.4
Oct.-Dec.	458.4	—	.2	458.6	10.0	—	2.0	80.2	92.2	1.2	93.4	1.7	363.5	365.2
Jan.-Mar.	365.2	—	.2	365.4	10.0	—	7.3	111.4	128.7	1.2	129.9	1.7	233.8	235.5
Apr.-May	235.5	—	.9	236.4	5.2	—	24.1	54.2	83.5	1.0	84.5	.7	151.2	151.9
1982-3	151.9	592.6	3.9	748.4	41.7	—	43.3	440.6	525.6	3.0	528.6	.7	219.1	219.8
June-Sept.	151.9	592.6	.8	745.3	16.2	—	2.0	167.7	185.9	1.3	187.2	.6	557.5	558.1
Oct.-Dec.	558.1	—	.2	558.3	10.0	—	2.0	92.0	104.0	1.0	105.0	.7	452.6	453.3
Jan.-Mar.	453.3	—	1.6	454.9	10.7	—	7.6	117.3	135.6	.3	135.9	.7	318.3	319.0
Apr.-May	319.0	—	1.3	320.3	4.8	—	31.7	63.6	100.1	.4	100.5	.7	219.1	219.8
1983-4[1]	219.8	477.1	30.1	727.0	40.9	—	36.6	466.2	543.7	2.2	545.9	1.5	179.6	181.1
June-Sept.	219.8	477.1	11.7	708.6	15.8	—	1.9	184.9	202.6	.8	203.4	1.1	504.1	505.2
Oct.-Dec.	505.2	—	4.9	510.1	9.9	—	1.9	118.7	130.5	.7	131.2	1.4	377.5	378.9
Jan.-Mar.	378.9	—	10.6	389.5	10.5	—	7.4	101.2	119.1	.3	119.4	1.5	268.6	270.1
Apr.-May	270.1	—	2.9	273.0	4.7	—	25.4	61.4	91.5	.4	91.9	1.5	179.6	181.1
1984-5[4]	181.1	472.5	20.0	673.6	—	80.0	—	400.6	480.6	3.0	483.6			190.0
June-Sept.	181.1	472.5	5.8	659.4	15.7	—	1.9	167.0	184.6	.6	185.2	1.0	473.2	474.2
Oct.-Dec.														

[1] Preliminary. [2] Uncommitted inventory. [3] Includes quantity under loan & farmer-owned reserve. [4] Estimate. *Source: Economic Research Service, U.S.D.A.* T.436

Volume of Trading in Oats Futures at Chicago Board of Trade In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1978-9	103.8	121.3	120.0	149.0	141.0	67.7	59.3	93.9	51.6	95.4	87.1	135.7	1,225.3
1979-0	127.8	111.6	76.1	98.6	96.0	47.1	56.9	85.3	53.8	81.1	131.5	144.8	1,110.6
1980-1	200.4	183.9	199.6	197.1	167.9	151.0	124.8	170.2	129.2	136.4	120.5	162.2	1,943.2
1981-2	125.3	134.6	117.0	144.5	264.9	221.0	166.7	184.7	204.3	223.6	196.5	247.9	2,231.0
1982-3	221.0	218.9	151.2	113.2	127.6	82.5	121.1	154.0	141.3	213.6	159.1	159.7	1,863.2
1983-4	160.1	254.5	180.4	95.1	102.4	57.9	58.9	91.9	77.1	89.8	59.8	76.6	1,304.5
1984-5	64.7	88.7	38.5	41.0	48.8	39.5	46.1	38.1	33.6				

Source: Chicago Board of Trade T.440



Average Cash Price[1] of No. 2 Heavy White Oats at Minneapolis In Cents Per Bushel

													— Average Prices — — No. 2 Heavy —	
Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]	White, Portland	Toledo
1977–8	115	102	111	117	134	132	132	132	133	140	143	136	127	144	136
1978–9	124	128	136	139	147	140	147	154	160	148	155	168	143	179	137
1979–0	160	147	155	165	167	159	152	150	148	152	162	188	157	187	160
1980–1	190	170	186	196	215	216	220	225	223	221	223	218	209	242	217
1981–2	202	199	202	209	228	210	223	226	216	221	216	212	214	236	223
1982–3	187	153	151	151	167	167	167	163	163	173	171	167	165	218	155
1983–4[2]	160	179	194	200	197	194	198	182	187	189	196	182	187	195	201
1984–5	184	177	179	184	192	187	181	182						194	200

[1] Weighted average of reported daily cash sales. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.435

Oats Under Price Support Through the End of the Month (Cumulative Total from Current Season's Crop) In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1977–8	7.8	30.0	48.5	54.9	59.5	62.3	65.3	67.1	73.2	76.1	77.9	78.9	78.9
1978–9	.5	8.2	14.9	18.5	21.2	22.4	23.9	24.2	24.5	24.7	24.8	24.8	24.8
1979–0	—	2.2	5.0	7.1	8.7	9.5	10.5	11.0	11.6	12.1	12.2	12.2	12.2
1980–1	—	1.8	3.4	4.4	4.9	5.7	6.0	6.1	6.2	6.3	6.3	6.3	6.3
1981–2	.6	3.4	6.1	7.4	8.0	8.7	9.3	9.5	9.6	9.6	9.6	9.6	9.6
1982–3	.1	1.2	4.0	5.8	6.9	7.7	8.3	8.5	8.8	9.0	9.1	9.1	9.1
1983–4	.1	1.0	1.4	2.8	3.1	3.2	3.4	3.5	3.5	3.6	3.6	3.6	3.6
1984–5	—	.9	2.1	2.6	2.8	3.0	3.1						

Source: U.S. Department of Agriculture T.432

OATS

Month End Open Interest of Oats at the Chicago Board of Trade & Winnipeg Commodity Exchg.

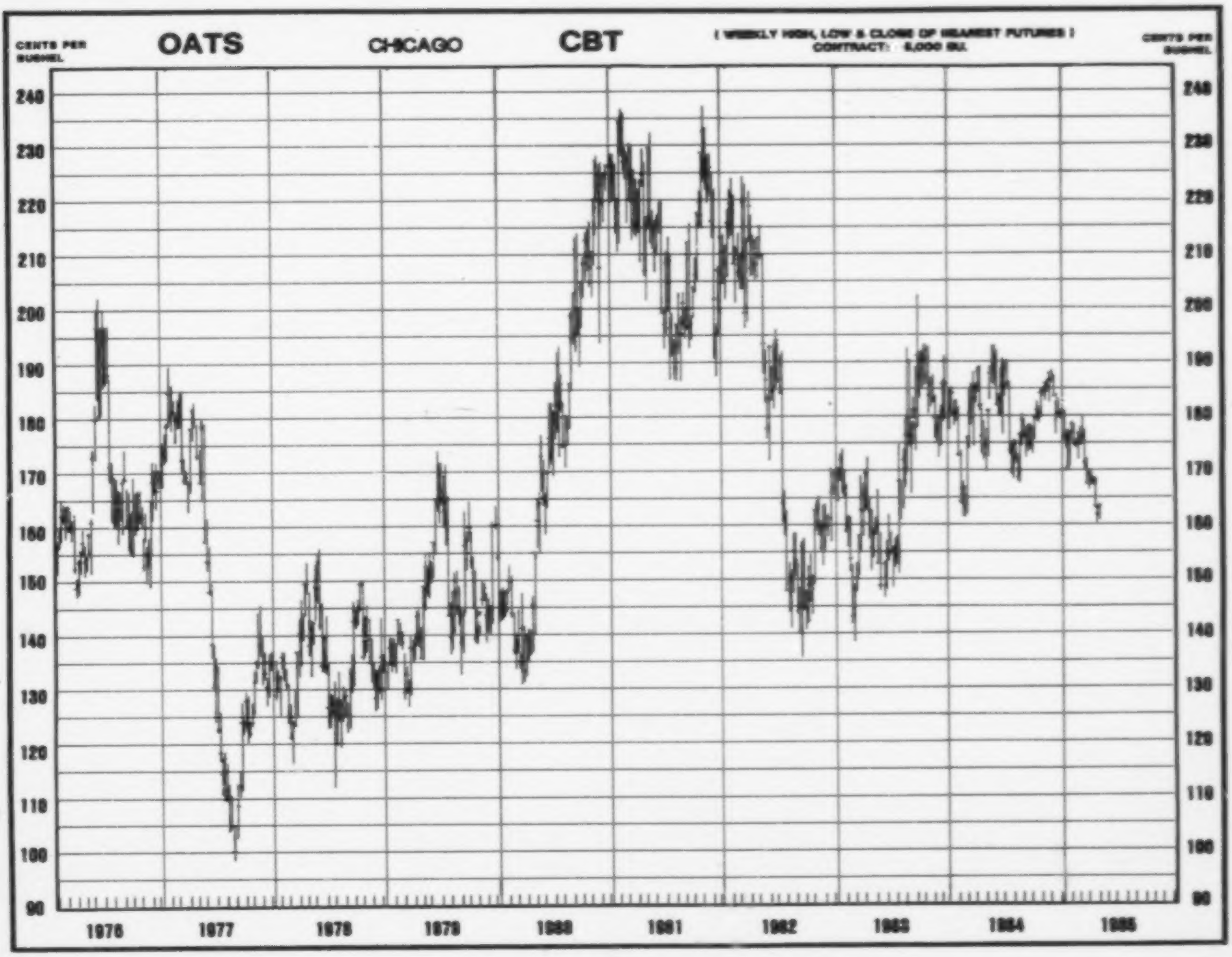
	Chicago (In Millions of Bushels)												Winnipeg (In Contracts)			
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mar.	June	Sept.	Dec.
1979	31.1	32.8	24.4	29.8	25.4	28.8	27.0	32.2	29.2	28.6	26.2	25.8	2,515	2,778	3,085	2,635
1980	23.8	23.2	17.5	23.2	21.2	25.8	35.3	41.3	41.6	39.5	37.6	27.6	2,827	2,315	3,178	3,598
1981	36.2	36.[illegible]	27.0	25.2	27.8	29.7	25.3	23.9	29.0	45.6	42.4	34.6	3,295	2,625	2,203	1,863
1982	36.5	39.6	40.5	40.5	43.4	45.8	43.4	32.6	30.5	31.4	23.7	21.5	1,298	1,185	1,155	1,225
1983	30.8	35.8	43.3	45.1	48.8	42.5	49.8	48.2	41.8	36.7	26.0	22.1	1,202	1,313	3,170	1,978
1984	21.8	24.3	23.7	21.5	21.0	21.5	24.2	23.1	23.3	22.4	20.8	18.7	1,529	3,127	3,551	1,073
1985	19.4	19.0	16.5										1,028			

Source: Chicago Board of Trade & Winnipeg Commodity Exch. T.438

Average Price Received by U.S. Farmers for Oats In Cents Per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]
1979–0	133	124	129	131	141	131	139	137	134	138	143	148	136
1980–1	150	153	163	165	184	192	198	201	208	205	205	199	179
1981–2	184	172	174	178	188	194	197	199	202	199	199	188	189
1982–3	157	139	135	132	140	144	146	148	149	154	154	151	148
1983–4	146	145	155	162	167	173	181	188	182	182	184	180	169
1984–5	171	167	167	174	171	172	174	170	171				

[1] Weighted average by sales. *Source: Crop Reporting Board, U.S.D.A.* T.433

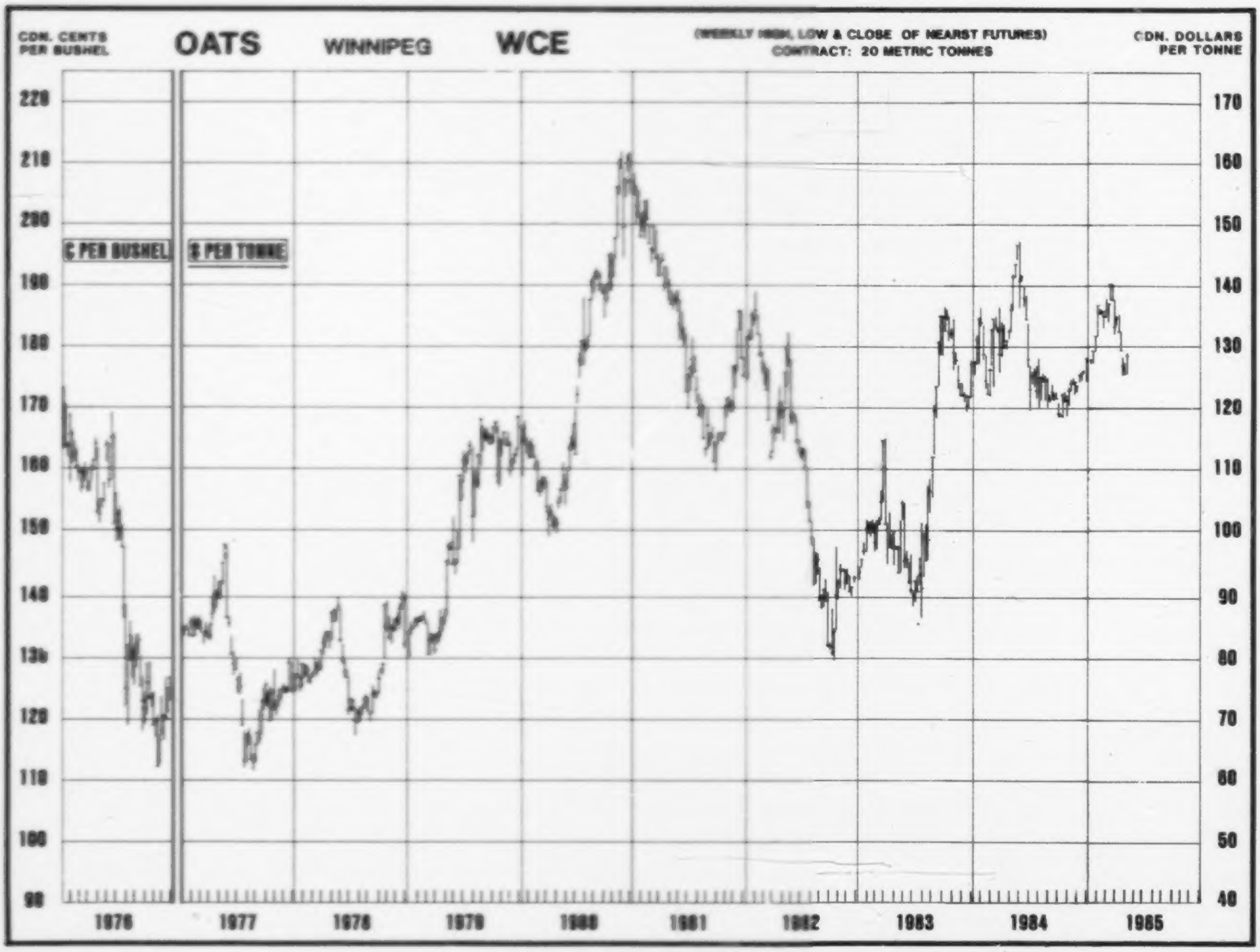


High, Low & Closing Prices of May Oats Futures at the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery								Delivery Year					Life of Delivery Range
		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1980	High	173½	196	189½	180¾	181	184½	172¼	172	169¾	162	153	147	171	196
	Low	169½	169¼	162¼	164	167	160	161	163¼	152½	144½	131	133¼	147	132
	Close	170½	184½	166	178	177¾	165¼	168	168¾	154¾	148	133¼	146½	168	—
1981	High	189	191	219½	217½	227	228	244½	244	232½	237	225¾	229½	232¼	244¼
	Low	181	179½	189	197½	207½	210	216½	210½	210½	212	206½	206	201	179½
	Close	183	189	212½	217	218	221	243½	226¾	216¼	224¼	223	213	224½	—
1982	High	231½	230	222½	217	194½	207	222½	212	209½	213¼	206	221¾	215	231½
	Low	226¼	212½	210	193	180½	185¼	197¾	177½	193¾	191½	186	202¾	200¼	177½
	Close	229¼	215	216	194½	185¾	205¾	206	200¼	207¾	199	203¼	208	207	—
1983	High	196	185	182½	177½	175	172¼	184½	179¾	181¼	175½	169	172½	163½	196
	Low	188½	173½	164	158½	163½	161	165½	172	172¼	149	151	151¾	154	149
	Close	189	176½	167¾	171	170¼	164	177½	174½	174½	149¼	160¼	155¾	157¼	—
1984	High	185	183½	200	226	220	206	199½	192¼	188	181½	185½	189¼	193	226
	Low	179½	177	181	189½	199¼	193	184½	180½	178	163	169	169¾	171½	163
	Close	179½	181½	197½	200	206	193	184½	188¾	180	168¾	185½	171	193	—
1985	High	—	191	185¾	181½	175	179¾	180¾	179¾	177½	174½	173¼			
	Low	—	181	175	171	171	173	176	172½	169¼	167½	167¼			
	Close	—	190	178½	172¼	173½	179	179	176¾	172¼	170¼	167¾			

Source: Chicago Board of Trade

T.439



Olive Oil

During the 1984 production season, world disappearance of olive oil was expected to accelerate more sharply than ever since 1979/80. Output from the major Mediterranean producing countries, including Spain, Greece, and Portugal was expected to decline seasonally. It was also expected that this decline would be partially offset by substantial production increases in Italy and Tunisia. These opposing trends would result in a decline in world olive oil production by 28 percent, or 0.56 million tonnes, in 1983/84 according to the respected trade publication *Oil World.*

Disappearance of olive oil, which had also reportedly been increasing sharply since the beginning of the 'eighties, was expected to decline during 1983/84, mostly influenced by the production decline and by limited budgets of EC consuming countries where stocks of olive oil are financed by commission. However, world stocks of pressed and residual olive oil were expected to decrease by about three tenths to 0.9 million tonnes by the fourth quarter of 1984, and stocks-to-usage ratios were expected to be at the lowest levels in ten years. This was thought to be due in part to the necessity of drawing down older-crop stocks until new-crop production peaked in the November/December period.

The USDA cited a movement in Spain to displace soybean oil with olive oil in Spain's canning industry. It was thought that, because of excess olive oil supplies due to government regulation, about 30,000–40,000 tons of soybean oil could be displaced. Vegetable oil regulations for 1984/85 were expected to link government olive oil purchases to the producers' obligation to store a like amount of oil that would be sold to a government agency. Crushers and producers would be eligible for subsidized loans when the average market price of olive oil fell below a specified target level. Spain's ending stocks of olive oil were estimated at 220,000 tons in 1983/84 and and forecast at 253,000 tons in 1984/85.

World Production of Olive Oil (Pressed Oil)[2] In Thousands of Metric Tons

Crop Year[2]	Algeria	Greece	Italy	Jordan	Lebanon	Argentina	Morocco	Portugal	Spain	Syria	Tunisia	Turkey	Libya	Israel	World Total
1971–2	23	186	616	1	11	9	68	42	341	22	167	51		1	1,568
1972–3	15	249	340	6	7	28	21	48	440	33	70	154		2	1,422
1973–4	16	192	543	—	8	22	30	42	447	14	130	53		—	1,520
1974–5	8	237	433	7	14	19	26	48	333	44	117	110		—	1,414
1975–6	18	257	633	1	5	17	38	36	455	33	180	96		5	1,788
1976–7	15	224	301	5	12	12	30	36	390	56	85	150		—	1,334
1977–8	5	234	688	2	6	14	15	30	361	38	130	60		4	1,594
1978–9	14	240	419	7	6	15	20	40	500	66	83	160	5	0	1,577
1979–0	10	203	626	1	15	22	39	66	433	42	85	52	4	5	1,599
1980–1	18	321	515	10	2	11	23	32	479	83	145	170	8	2	1,921
1981–2[1]	15	256	470	5	12	14	34	23	300	45	70	60	8	4	1,337
1982–3[3]	13	325	368	8	5	9	30	79	640	75	155	160	10	4	1,908
1983–4[3]	10	231	600	10	4	10	22	18	260	29	155	40	10	3	1,670
1984–5[3]	15	200	450	8	6	9	28	33	600	77	90	125	8	4	1,820

[1] Preliminary. [2] Total pressed oil in marketing year ending Oct. 31; excludes sulfur oil extracted from residues. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.;* Oil World.

T.441

Wholesale Price of Olive Oil (Imported, Edible) in Drums at N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	39.3	39.3	39.3	39.3	39.3	39.3	39.3	42.7	42.7	42.7	42.7	42.7	40.7
1972	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7
1973	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	N.A.	54.5	90.0	86.7	51.3
1974	86.7	86.7	86.7	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	92.7	92.7	92.5	89.6
1975	110.7	116.7	116.7	116.7	116.7	116.7	116.7	112.0	116.7	N.A.	N.A.	N.A.	112.7
1976	103.3	103.3	103.3	103.3	103.3	103.3	103.3	103.3	86.7	86.7	86.7	86.7	97.8
1977	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7
1978	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.3	83.3	83.3	83.3	83.3	85.4
1979	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3
1980	62.5	78.1	83.3	83.6	85.6	87.1	85.5	86.3	87.5	86.5	87.5	87.5	83.3
1981	87.0	85.0	81.3	85.6	83.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1982							NO LONGER AVAILABLE						

Source: Economic Research Service, U.S.D.A.

T.442

Onions

Salient Statistics of Onions in the United States

Crop Year	Stocks—Jan. 1 (1,000 Cwt.) Common Storage	Cold Storage	Total Stocks	Acres Harvested	Yield Per Acre	Production	Price Per Cwt.	Farm Value	Domestic Exports[3]	Imports[3]	Per Capita[2] Consumption — Farm Weight (Lbs.)	Frozen
				Acres	Cwt.	1,000 Cwt.	Dollars	$1,000	1,000 Cwt.			
1979	6,556	66	6,622	123,910	312	38,602	6.98	237,432	1,851	1,304	9.7	.74
1980	7,752	99	7,851	112,960	296	33,476	11.40	346,539	2,614	1,400	9.8	.68
1981	6,235	78	6,313	111,630	314	35,021	14.70	475,395	2,822	1,581	9.8	.70
1982[1]	5,560	35	5,595	125,220	333	41,637	8.25	306,371			11.4	.80
1983[1]		28		121,540	316	38,370	12.40	427,997			12.1	.60
1984[1]		32		125,950	330	44,611	10.80	405,553				

[1] Preliminary. [2] Onions and shallots. Includes 0.1 pounds of shallots in each year. [3] Year beginning July. *Source: Economic Research Service, U.S.D.A.* T.443

Production of Onions in the United States In Thousands of Hundredweight (Cwt.)

Year	Spring: Texas	California	Arizona	Total (All)	Summer: New Mexico	Texas	California	Colorado	Idaho	Michigan	Minnesota	New York	Oregon	Total (All)	Grand Total
1979	3,504	1,904	536	5,944	960	1,520	9,504	2,535	2,295	2,686	125	4,818	4,776	32,658	38,602
1980	3,569	1,683	623	5,875	1,131	1,764	6,000	2,460	2,453	1,800	201	4,433	4,538	27,601	33,476
1981	2,700	2,160	512	5,372	1,242	1,488	7,025	2,925	2,625	2,446	199	3,933	4,460	29,649	35,021
1982	3,492	2,805	876	7,173	1,643	1,544	10,395	3,255	2,475	2,336	168	4,550	4,821	34,464	41,637
1983	3,800	2,166	656	6,622	1,248	1,643	9,179	3,432	2,444	2,294	158	2,793	5,210	31,748	38,370
1984[1]	3,348	2,734	805	6,887	1,365	1,560	9,819	4,270	2,071	2,622	156	3,384	6,128	34,724	41,611
1985[1]	3,000														

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.444

Cold Storage Stocks of Fresh Onions in the United States In Thousands of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1979	6,584	6,023	5,400	2,967	2,107	1,254	844	800	253	1,747	1,487	4,298
1980	9,913	8,446	6,430	4,070	1,124	442	1,967	954	1,298	2,089	2,265	4,901
1981	7,777	6,972	4,422	3,730	1,247	591	1,828	649	143	719	665	3,219
1982	3,474	3,963	3,319	1,813	—	—	275	—	—	952	—	—
1983	4,183	4,407	4,116	2,988	1,042	235	325	724	385	785	1,348	8,826
1984[1]	8,648	7,006	2,527	343	1,230	556	527	1,212	5,270	5,618	5,354	6,949
1985[1]	7,465	5,518										

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.445

Average Wholesale Price of Onions at Chicago[1] In Dollars Per Hundred Pounds (Cwt)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	9.44	15.08	11.75	10.25	12.50	19.50	20.65	14.05	11.10	9.31	8.54	7.15	12.44
1980	7.75	7.04	6.75	9.00	20.00	20.50	14.63	13.50	13.50	12.67	11.25	14.70	12.61
1981	18.17	20.00	25.75	30.00	28.50	32.00	22.17	22.50	24.00	14.21	17.20	16.92	22.62
1982	21.44	19.79	16.88	17.00	18.25	17.92	13.25	16.00	11.25	10.00	9.50	8.29	14.96
1983	7.21	8.83	10.18	17.25	13.00	10.18	13.63	16.33	13.50	13.63	15.30	19.92	13.25
1984	20.00	24.20	27.13	29.81	15.19	15.00	19.00	18.50	14.80	12.06	12.58	12.54	18.40

[1] All yellow, all varieties, fair to good quality, all sizes & field run, track and street sales. *Source: Bureau of Labor Statistics* (0113–0216) T.447

Average Price Received by Farmers for Onions in the U.S. In Dollars Per Cwt.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[2]
1979	11.00	12.20	9.57	9.70	8.10	11.40	13.30	9.74	7.93	6.45	6.27	5.57	6.98
1980	4.50	4.20	5.30	6.83	9.86	10.70	9.20	10.40	11.30	10.90	11.50	14.20	11.40
1981	15.40	17.20	23.50	25.40	23.00	18.10	17.70	15.40	11.50	12.80	14.80	14.60	17.45
1982	18.40	18.10	13.40	12.40	13.10	9.43	11.90	12.60	7.83	7.12	6.90	6.35	11.46
1983	5.13	6.35	7.59	10.70	10.60	9.62	10.70	10.90	10.80	11.00	13.70	18.80	10.49
1984[1]	19.40	19.60	25.60	25.30	14.00	11.50	13.90	13.30	11.30	9.59	10.00	11.70	15.43
1985[1]	9.43												

[1] Preliminary. [2] Seasonal Average. *Source: Crop Reporting Board, U.S.D.A.* T.448

Orange Juice

Florida orange production in the 1983/84 season amounted to 116.7 million boxes compared with 139.6 million boxes harvested in the 1982/83 season. The Florida FCOJ pack in 1983/84 totaled 121.1 million gallons compared with 169.6 million a year earlier. Florida FCOJ sold in export markets totaled 12.8 million gallons in the 1983/84 season. This compared with exports of 12.5 million in the previous season. Canada was the primary market for U.S. exports of FCOJ. However, increasing Brazilian FCOJ production and the severe Florida freeze in January 1985 have limited export opportunities for Florida FCOJ.

As of March 1, 1985, the 1984/85 Florida orange crop was estimated by the USDA at 104 million boxes, off 11 percent from the 1983/84 crop. Production prospects for Early and Midseason oranges in Florida were 56 million boxes, 20 percent less than in 1983/84. The 1984/85 Florida Valencia crop was estimated at 48 million boxes, 2 percent above the 1983/84 crop.

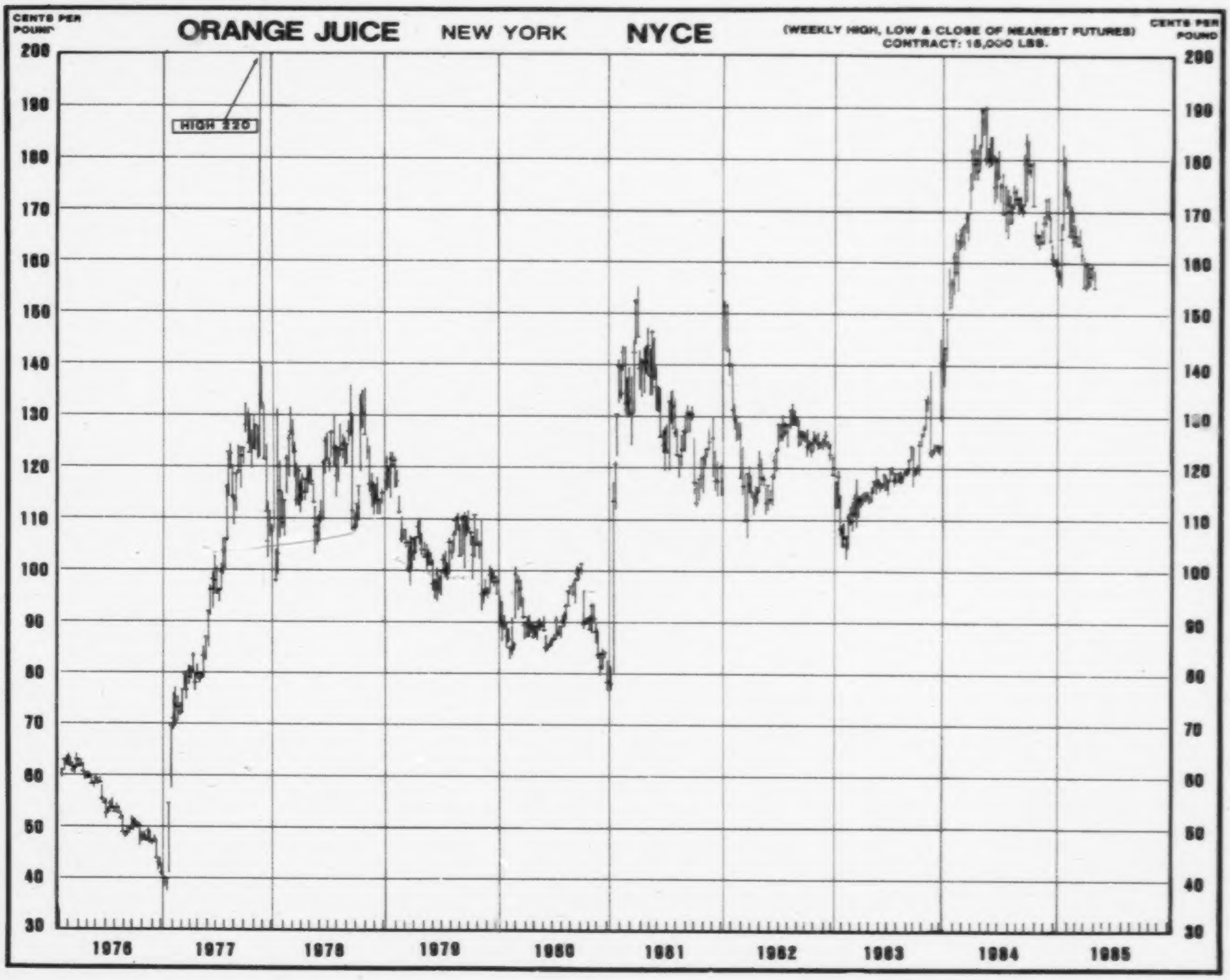
The January 21–22, 1985 Florida freeze reduced estimated juice yield to 1.36 gallons per box from the pre-freeze projection of 1.46 gallons. Even with carry-in stocks well above the previous season, the freeze was expected to result in a tight supply of FCOJ and a modest reduction in carryover. Imports of FCOJ from Brazil were expected to be heavy to meet domestic demand, estimated at about 213 million gallons versus 219.4 million in 1983/84.

After the Florida freeze, packers raised f.o.b. prices for unadvertised brands of FCOJ from $5.04 to $5.34 per dozen 6-ounce cans.

In early March 1985, cumulative 1984/85 movement of Florida FCOJ trailed the year-earlier period by 11 percent. Imports were up 28 percent compared with a year ago, and the net cumulative pack was 9 percent below the year-earlier level. Florida FCOJ inventories in early March 1985 were 17 percent higher than a year earlier.

Futures Market

Frozen concentrated orange juice (FCOJ) futures are traded on the Citrus Associates of the New York Cotton Exchange.



World Production of Oranges (Including Tangarines) In Thousands of Metric Tons

Season	Algeria	Argentina	Brazil	Australia	Greece	Israel	Italy	Japan	Mexico	Morocco	Spain	Turkey	South Africa	United States	World Total
1974–5	480	1,014	4,065	438	539	1,016	2,098	3,952	1,110	583	2,479	622	499	9,913	30,660
1975–6	480	958	4,065	389	567	995	1,931	4,234	905	552	2,643	645	564	10,170	30,918
1976–7	506	990	3,754	391	533	968	2,258	3,575	1,283	784	2,489	671	463	10,144	30,567
1977–8	508	990	4,321	352	455	949	1,950	4,120	750	1,070	1,914	785	600	9,268	28,479
1978–9		925	6,471	451	506	992	1,959	3,637	1,398	827	2,526	806	600	8,310	24,050
1979–0		921	9,282	448	360	943	2,104	3,945	1,810	1,024	2,597	835	565	10,734	38,502
1980–1		905	9,872	381	561	812	2,057	3,229	1,720	965	2,605	862	569	9,514	36,725
1981–2[1]		820	10,853	414	745	1,123	2,131	3,150	1,820	988	2,468	850	577	6,895	35,446
1982–3[2]					691	977	1,800	3,242	1,600	999	2,405	860		8,635	
1983–4[2]														6,566	

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.449

U.S. Salient Statistics of Oranges & Orange Juice

Season	Production[2] — Million Boxes					Farm Price $ Per Box	Farm Value Million $	Frozen Concentrated Orange Juice—Florida — In Million Gallons				Florida Crop Processed — Million Boxes					Yield Per Box (Gall.)
	Arizona	California	Florida	Texas	Total			Carry-in	Pack	Total Supply	Total Season Movem.	Frozen Concentrates	Juice	Chilled Pdt's Sections & Salads	Other Processed	Total Processed	
1976–7	4.0	45.3	186.8	6.9	243.0	3.34	811.2	29.7	178.7	196.2	180.9	148.7	27.3	.4	8.8	185.2	1.07
1977–8	2.6	42.6	167.8	6.1	220.1	5.45	1,198.7	29.1	185.0	200.8	185.1	132.2	25.3	.4	8.1	166.0	1.23
1978–9	2.9	37.3	164.0	6.4	210.6	6.15	1,296.0	33.5	206.2	221.9	206.1	130.2	22.8	.3	6.5	159.8	1.34
1979–0	3.5	59.4	206.7	4.0	273.6	4.76	1,304.2	37.4	256.4	293.8	239.0	174.9	24.4	.3	7.0	206.6	1.34
1980–1	2.6	65.3	172.4	4.3	244.6	4.85	1,327.7	57.3	249.6	306.9	240.6	145.3	19.6	.2	6.4	171.5	1.21
1981–2	3.1	41.9	125.8	5.9	176.7	5.30	1,295.3	69.0	214.9	283.9	230.5	105.2	16.3	.2	4.5	126.1	1.28
1982–3	3.8	76.1	139.6	5.7	225.2	6.61	1,167.8	53.4	228.4	281.8	239.0	114.6	18.1	.2	2.7	135.5	1.48
1983–4[1]	1.8	48.3	116.7	2.5	169.3	6.56	1,457.0	42.8	239.9	282.7	228.3	94.0	17.0	.4	3.1	114.4	1.29
1984–5[1]	2.7	54.0	104.0	—	160.7			54.4									1.33

[1] Preliminary. [2] Fruit ripened on trees, but destroyed prior to picking is not included. *Source: Economic Research Service, U.S.D.A. Florida Citrus Processors Assoc.* T.450

U.S. Cold Storage Stocks of Orange Juice Concentrate[2] In Millions of Pounds (Gallon Equivalent)

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1976	756.6	943.0	1,046.9	1,016.1	1,075.8	1,203.7	1,339.9	1,229.1	1,075.4	877.1	740.3	605.2
1977	613.6	681.4	845.5	932.8	955.5	1,040.6	914.3	806.5	647.1	551.7	456.3	333.3
1978	392.8	511.5	617.1	617.3	744.4	854.7	883.1	811.6	720.2	549.6	485.4	359.8
1979	506.5	762.3	996.6	995.0	1,044.4	1,186.5	1,228.4	1,116.4	926.2	704.6	560.1	466.6
1980	559.0	827.2	1,062.5	1,124.8	1,221.4	1,429.7	1,500.3	1,369.3	1,182.4	963.7	842.7	679.5
1981	722.4	907.1	1,053.2	1,180.1	1,264.4	1,502.2	1,491.3	1,307.8	1,178.8	1,022.2	392.2	759.1
1982	753.1	957.0	1,172.3	1,300.7	—	—	1,406.2	—	—	846.5	—	—
1983	835.9	1,028.1	1,016.2	963.3	1,187.0	1,408.0	1,318.6	1,192.4	960.8	810.7	684.8	595.0
1984	631.1	785.7	956.3	976.3	920.1	998.2	903.2	780.4	707.0	595.8	557.3	564.8
1985[1]	651.6	883.4	1,079.6									

[1] Preliminary. [2] Adjusted to 42° BRIX basis (9.896 lbs./gal.) beg. 1/1/81; prev. 43.4°. *Source: Crop Reporting Board, U.S.D.A.* T.451

Month–End Open Interest of Frozen Concentrated Orange Juice Futures In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	8,973	10,002	10,611	11,980	12,381	12,878	11,964	13,950	12,781	12,878	9,212	9,073
1979	7,916	8,503	6,734	7,887	7,223	8,261	8,058	8,116	6,510	7,101	8,423	10,428
1980	7,612	6,501	6,126	6,390	6,210	5,923	6,186	6,920	8,046	9,063	9,239	9,582
1981	7,980	10,787	12,018	11,354	11,667	11,925	10,675	9,751	9,454	7,991	7,654	8,037
1982	9,519	8,634	6,580	6,238	6,227	5,808	6,007	6,395	5,666	5,775	7,106	9,359
1983	9,720	7,136	6,229	6,267	6,225	6,264	5,969	6,413	6,487	6,155	5,732	7,186
1984	8,873	10,650	11,676	11,733	11,295	12,965	11,646	10,350	10,039	9,356	9,339	8,542
1985	7,854	6,680	6,452									

Source: Citrus Assoc. of the N.Y. Cotton Exch. T.456

ORANGES AND ORANGE JUICE

High, Low & Closing Prices of May Orange Juice[1] Futures at New York In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1980	High	104.60	104.00	102.00	101.50	102.00	109.80	109.90	111.25	100.00	102.00	100.00	91.00	101.20	91.50	89.20	111.25
	Low	94.50	96.75	97.90	92.70	95.00	102.00	101.60	97.50	95.10	97.25	87.00	83.70	88.00	86.70	86.50	83.70
	Close	98.90	100.75	101.30	95.80	102.00	108.70	109.50	98.70	98.50	97.90	89.65	86.15	88.70	88.80	87.55	—
1981	High	107.80	94.75	95.50	96.90	94.55	97.50	103.00	104.45	96.15	92.20	133.50	149.50	150.20	155.10	143.50	155.10
	Low	91.35	91.50	92.80	90.60	91.10	93.45	96.80	92.45	90.25	83.30	84.00	135.25	126.80	133.70	138.00	83.30
	Close	91.35	93.00	94.40	91.10	93.20	97.50	102.20	95.00	91.80	85.00	133.35	138.40	150.20	139.60	138.35	—
1982	High	149.50	151.50	150.95	149.40	144.75	145.90	140.00	139.50	129.30	133.50	156.90	146.40	133.00	120.50	120.00	156.90
	Low	136.00	140.25	144.80	138.75	134.00	134.00	134.25	126.00	122.30	119.00	119.50	129.00	106.75	110.90	113.50	94.00
	Close	146.45	148.45	150.70	138.75	142.90	137.25	136.95	126.10	127.70	122.55	146.20	130.30	115.10	113.30	117.70	—
1983	High	142.85	130.20	132.00	130.00	130.20	133.50	133.25	130.30	128.60	129.05	122.00	112.80	114.75	115.50	120.50	163.75
	Low	122.00	121.95	126.05	123.80	126.50	127.60	129.00	125.55	126.00	121.25	105.70	103.10	107.30	113.10	113.60	103.10
	Close	127.50	126.50	127.75	130.00	128.25	133.50	129.50	126.90	127.00	121.85	107.70	110.35	114.70	113.70	119.70	—
1984	High	106.90	104.95	104.30	108.50	110.00	111.30	114.25	121.00	122.50	149.00	159.50	167.20	177.40	186.40	190.00	190.00
	Low	104.00	100.50	101.40	103.30	106.90	109.20	110.85	109.00	119.70	121.10	141.00	155.00	160.00	174.10	177.75	100.50
	Close	104.80	102.05	103.70	106.60	108.80	110.95	112.45	120.50	121.75	146.00	156.75	163.00	174.20	186.15	177.75	—
1985	High	170.00	176.00	181.50	179.50	168.50	172.00	185.00	181.75	172.90	170.00	183.50	178.00	170.35			
	Low	155.00	166.50	174.50	167.00	164.90	167.00	167.50	166.50	166.80	162.40	159.20	166.60	160.30			
	Close	165.60	176.00	178.65	168.00	166.90	169.70	181.20	166.90	169.90	163.90	178.60	168.10	161.60			
1986	High	166.25															
	Low	160.35															
	Close	161.30															

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[1] Frozen concentrated orange juice. *Source: Citrus Associates of the N.Y. Cotton Exch., Inc.* T.455

Volume of Trading of Frozen Concentrated Orange Juice Futures In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	32,409	25,867	29,847	16,858	23,331	26,682	23,252	20,257	25,430	28,087	20,121	12,264	284,405
1979	25,080	17,387	15,162	11,378	11,661	15,526	14,326	16,014	15,010	15,141	12,889	15,239	184,813
1980	21,982	13,010	22,555	9,337	6,742	7,914	8,308	9,715	11,800	16,276	13,042	22,183	162,864
1981	35,041	32,755	49,107	39,785	32,611	35,459	32,944	29,979	22,927	25,435	19,747	31,392	387,182
1982	28,968	25,524	27,139	17,038	12,206	21,501	14,577	14,242	8,424	9,606	8,647	19,188	207,070
1983	28,122	20,345	11,754	6,704	7,614	7,823	4,881	4,531	5,621	9,690	6,409	10,773	124,267
1984	33,189	36,206	34,643	32,774	26,882	30,273	23,803	15,246	36,508	23,693	11,737	12,410	317,364
1985	28,768	20,572	8,135										

Source: Citrus Assoc. of the N.Y. Cotton Exch. T.452

Wholesale Index Price of Frozen Orange Concentrate[1] 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2
1980	260.2	260.2	260.2	254.3	254.3	249.2	249.2	249.2	249.2	249.2	236.5	236.5	250.7
1981	241.1	280.2	312.2	338.1	338.1	338.1	338.1	338.1	335.5	334.0	323.4	313.1	319.2
1982	312.9	337.7	334.5	326.5	315.4	308.4	308.7	307.1	307.8	307.7	307.5	303.2	315.5
1983	304.0	300.8	299.6	299.1	302.3	300.7	301.1	300.8	302.4	302.5	303.8	303.9	301.8
1984	316.4	361.6	373.3	380.3	385.2	395.0	387.6	392.4	403.7	406.6	403.7	400.8	383.9
1985	400.8												

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[1] Packer to wholesale distributor, or retail chain store, f.o.b. plant. *Source: Bureau of Labor Statistics* (0242–0301.99) T.454

Wholesale Price of Oranges (California) F.O.B. Packed Fresh In Dollars Per Box

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	11.90	11.20	10.54	9.37	9.97	10.10	10.70	13.40	14.50	14.30	13.50	13.50	11.91
1979	13.50	12.29	13.68	13.19	13.58	15.98	13.50	12.40	12.40	11.00	11.60	10.70	12.82
1980	9.72	9.72	10.60	9.54	9.21	9.39	9.52	9.52	9.50	9.54	13.40	11.60	10.11
1981	11.00	10.90	10.20	9.78	10.00	12.10	14.10	12.80	12.60	11.70	11.50	12.70	11.62
1982	13.50	13.80	13.50	14.20	17.20	17.50	18.70	20.30	28.30	28.40	16.50	12.80	17.89
1983	10.80	10.40	10.50	10.30	9.85	10.60	11.70	11.30	10.20	9.30	12.90	13.00	10.90
1984	13.10	12.00	11.60	12.60	19.20	21.60	22.50	23.50	22.36	25.32	21.29	18.72	18.65
1985	18.04												

Source: Economic Research Service, U.S.D.A. T.453

Palm Oil *(See feature article on page 21T)*

World palm oil production in the 1984/85 season was estimated by the USDA in early 1985 at 6.85 million metric tons, up nearly 9 percent from estimated 1983/84 production of 6.29 million. World palm oil output has expanded at an average of more than 8 percent annually since 1979, with growth concentrated in Malaysia and Indonesia. A temporary drop in 1983 Malaysian production was attributed to the lagged effect of drought and what the USDA termed the "tired tree" phenomenon associated with the introduction of the Cameroon Weevil. Much of the increased supply prospect for 1984/85 was expected to come from Malaysia, reflecting continued recovery after the 1982 drought, the beneficial effects of the palm pollinating weevil, and an expanded bearing area. Reports indicate that oil palm plantings in Malaysia and Indonesia were record large in 1984 and 1983, respectively, which suggests a significant increase in palm oil production in about 7 years.

World stocks of palm oil at the start of the 1984/85 season were estimated by the USDA at 578 thousand tonnes, up considerably from 449 thousand a year earlier. Exports in 1984/85 were expected to increase to about 4.52 million tonnes from 3.88 million. India and Pakistan, two of the largest importers, were expected to account for most of the increase in exports by Malaysia and Indonesia.

World consumption of palm oil was estimated to increase about 9 percent in 1984/85, from estimated 1983/84 consumption of 6.05 million tonnes. Palm oil utilization has increased by some 400 thousand tonnes annually since 1979, but was expected to register a larger increase in 1985. While estimated world consumption of palm oil is only about one-half as large as soybean oil, world palm oil exports exceed soybean oil exports.

Ending 1984/85 world stocks of palm oil were projected by the USDA to total about 583 thousand tonnes up only slightly from beginning stocks, and representing about 9 percent of estimated 1984/85 world consumption.

World Palm Oil Statistics In Thousand Metric Tons

	Production									Exports							
Year	Malaysia	Colombia	China	Indonesia	Ivory Coast	Papua N. Guin.	Zaire	Nigeria	World Total	Malaysia	Indonesia	Ivory Coast	E.C.-10	Singapore	Zaire	Papua N. Guin.	World Total
1978	1,786	51	87	525	150		137	515	3,713	1,514	412	82		299	10	28	2,481
1979	2,168	70	93	641	124	36	173	500	4,265	1,901	351	49	92	492	—	35	2,935
1980	2,576	75	100	702	182	39	171	520	4,828	2,258	503	80	127	679	10	33	3,721
1981	2,824	80	106	752	147	45	175	520	5,168	2,469	196	63	115	423	5	44	3,416
1982	3,512	87	112	838	160	50	175	525	6,003	2,768	260	68	99	502	5	48	3,925
1983[1]	3,018	104	115	907	162	55	159	530	5,623	2,893	346	58	126	420		58	3,977
1984[1]	3,500	110	110	921	133	60	157	540	6,285	2,860	217	40	120	395		54	3,883
1985[2]	3,900		110	1,054	135	60	160	550	6,847	3,310	350	25	129	400			4,516

[1] Preliminary. [2] Projected. *Source: Economic Research Service, U.S.D.A.* T.457

Palm Oil—U.S. Supply & Distribution In Millions of Pounds

	Supply			Utilization								Prices		
				Food Uses										
Year Begin. Oct.	Imports	Stocks Oct. 1	Total Supply	Shortening	Margarine	Salad or Cooking Oil	Other	Total	Non-Food Uses	Total Disappearance	Exports (& Shipments)	Palm Kernel Oil ¢ Per Pound	U.S. Ports C.I.F. ¢ Lb.	Rott.[2] U.S. $ Metric Ton
1978–9	277	74	351							265	12	36.9	28.7	652
1979–0	212	74	280							223	21	42.1	31.2	597
1980–1	324	42	242	188						299	9	42.8	28.1	589
1981–2[1]	218	58	276	192						218	10	42.8	27.1	479
1982–3[1]	282	47	329	206						286	4			424
1983–4[1]	374	39	413	270						370	0			746
1984–5[1]	440	25	465							435	0			608

[1] Preliminary. [2] CIF Rotterdam—Sumatra/Malaysia, CIF NW Europe. *Source: Economic Research Service, U.S.D.A.* T.458

Average Wholesale Palm Oil Prices, CIF, Bulk, U.S. Ports In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	23.1	25.2	27.4	28.0	28.4	30.6	31.2	28.5	29.8	30.5	30.4	31.0	28.7
1979	31.7	32.8	31.1	31.2	31.5	32.1	33.6	31.5	30.3	29.1	29.1	30.1	31.2
1980	32.0	32.4	31.8	29.6	27.8	28.1	27.6	26.5	25.5	22.3	27.1	26.9	28.1
1981	27.5	28.3	25.5	27.5	27.6	N.A.	N.A.	25.0	24.7	N.A.	N.A.	N.A.	27.1
1982	N.A.	N.A.	24.0	23.7	24.4	22.3	18.9	18.6	19.3	18.0	19.0	20.0	20.8
1983	19.5	19.0	18.8	19.8	20.7	19.5	20.6	26.2	30.6	31.1	32.0	37.5	24.6
1984	40.5	38.2	36.6	37.0	43.0	36.0	28.2	28.4					

Source: Economic Research Service, U.S.D.A. T.459

Paper

International prices for wood pulp and for uncoated paper reportedly weakened sharply during the last half of 1984. This was partly attributed to the effect of currency fluctuations and to expanded production capacity in the U.S. and in Europe.

However, the paper and paperboard industry continued to grow in 1984, and the growth was expected to be maintained into 1985. During 1984, U.S. production of paper and paperboard increased 5.6 percent over year-earlier levels to a record 69 million tons, while consumption rose by 8 percent, according to the American Paper Institute. Shipments of paper in the last half of the year tended to slow, partly influenced by the soaring U.S. dollar. At the same time, however, the demand for several grades of paper surpassed domestic shipments. The strong demand for many grades of paper was supplied by increased imports. Total 1984 U.S. paper imports amounted to 10 million tons, 24 percent over the 1983 level. Imports of newsprint rose by 15 percent and imports of other grades of paper rose by 75 percent over 1983. The strong dollar kept total 1984 U.S. exports of paper to be maintained at close to the 1983 export level of 4.5 million tons.

U.S. production of publication-grade coated papers increased by 9 percent in 1984 to about 6.2 million tons. Information technology expansion during the year accounted for a greater production of computer-printout paper and copier paper. U.S. newsprint consumption rose by 10 percent as domestic production increased by 7 percent and Canadian imports increased 13 percent.

The demand for printing and writing grades of paper was expected to expand modestly during 1985 due to continued economic recovery.

Shipments of (Paper Products) Shipping Containers[1] In Millions of Square Feet Surface Area

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1980	21,993	20,452	21,466	20,559	18,909	19,115	18,337	19,208	20,873	23,032	18,668	19,259	241,377
1981	21,136	19,916	21,656	21,590	19,938	21,151	20,710	20,801	21,257	22,058	18,317	17,587	246,152
1982	18,896	18,706	21,147	19,957	18,777	20,071	18,610	20,414	20,657	21,604	19,043	17,646	235,185
1983[2]	19,980	18,715	21,828	20,466	20,777	22,044	19,582	22,649	22,335	23,476	21,043	19,873	252,876
1984[2]	22,070	21,983	23,650	21,960	23,001	22,387	21,257	23,759	21,605	24,852	21,103	19,496	267,123

[1] Corrugated & solid fiber. [2] Preliminary. *Source: National Paperboard Association* T.463

Index Price of Coated Printing Paper, No. 3 Dec. 1973 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	161.7	163.2	163.7	165.4	166.5	167.1	167.1	167.7	168.1	171.8	171.8	171.7	167.2
1980	170.8	175.0	176.8	178.9	178.9	178.9	179.0	179.6	179.8	179.9	182.3	183.3	178.6
1981	183.5	185.7	186.8	189.3	191.4	191.4	191.4	189.6	198.1	202.0	202.4	204.6	193.0
1982	203.8	204.9	203.8	202.7	202.7	202.7	201.4	200.0	203.3	203.0	203.5	203.5	203.0
1983	203.5	203.6	203.5	204.2	204.2	204.3	204.3	203.7	210.8	210.9	211.7	211.8	206.4
1984	213.3	220.3	220.9	223.2	223.2	224.2	224.8	224.8	224.8	224.8	233.6	233.6	224.3
1985	234.2	234.6											

Source: Bureau of Labor Statistics (0913–0113.99) T.470

Salient Statistics of Newsprint in the United States and Canada In Thousands of Metric[3] Tons

	United States													Canada		
			Imports[3] By Countries of Origin									Stocks, Dec. 31				
Year	Production	Exports	Canada	Finland	Italy	Norway	Sweden	U.K.	Others	Total	Consumption	At Mills	At Publishers[2]	Production	Exports	Stocks At Mills
1979	3,685	65	6,372	—	—	—	35	—	97	6,504	10,197	16	628	8,756	7,809	162
1980	4,239	159	7,127	8	9	15	54	37	13	7,279	10,089	21	732	8,625	7,642	165
1981	4,753	283	6,936	4	0	12	23	—	2	6,977	10,165	38	961	8,946	7,870	194
1982	4,574	275	6,485	11	0	19	0	0	16	6,531	10,107	86	854	8,109	7,120	250
1983	4,688	265	6,845	17		33	21			6,919	10,587	99	790	8,486	7,470	303
1984[1]	5,025	258	7,688	31		63	86			7,901	11,441	64	877	9,016	7,964	283

[1] Preliminary. [2] Reporting only to A.N.P.A.; group represents about 75%. [3] Data for imports are in thousands of short tons. *Source: Newsprint Service Bureau, A.P.I.* T.464

Average Price of Newsprint Rolls Index: 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	269.4	269.4	269.4	269.4	277.6	283.7	283.7	N.A.	283.8	283.8	283.8	298.3	279.3
1981	301.9	301.9	301.9	301.9	301.9	N.A.	301.9	309.3	316.8	316.8	316.8	316.8	308.0
1982	316.8	318.1	318.1	330.0	324.0	319.4	318.4	318.4	318.4	318.4	229.8	299.8	315.8
1983	299.1	299.1	299.1	299.1	299.1	299.1	295.0	305.8	310.4	310.4	309.6	309.6	303.0
1984	309.6	309.6	316.0	314.8	314.8	314.8	334.5	331.2	331.2	332.5	336.9	336.9	323.8
1985	336.9	332.4											

[1] Standard rolls, contract, delivered to principal ports. *Source: Bureau of Labor Statistics* (0913–0291.99) T.468

U.S. Production & Consumption of Woodpulp, Pulpwood & Other Fibrous Materials In Thous. of Short Tons[6]

	Woodpulp Production												Consumption in the Manufacture of Paper and Board		
		Sulfite		Sulfate											
Year	Special Alpha[2]	Bleached	Unbleached	Bleached	Semi-Bleached	Unbleached	Soda	Groundwood	Semi-Chemical	Defibrated[3]	Screenings, Damaged, etc.	Total Wood Pulp	Wood Pulp[4]	Other Fibrous Materials[5]	Pulpwood[6]
1980	1,417	—1,911—		17,561	N.A.	19,735	N.A.	5,301	3,947		N.A.	52,959	N.A.	13,185	79,703
1981[1]	1,356	—1,797—		——39,597——				5,594	3,753			53,413		13,523	79,725
1982[1]	1,092	—1,434—		——39,478——				5,064	3,699			49,334		13,565	79,039
1983[1]	1,261			——42,358——				5,067	3,851			52,537		14,539	85,442
1984[7]	1,220			——44,875——				5,550	4,050			55,695		15,825	87,970

[1] Preliminary. [2] Also includes dissolving grades. [3] Or exploded. [4] Does not include wood pulp consumption by plants classified outside paper & board industries. [5] Waste paper; straw; rags; cotton fibre; manila stock; etc. [6] Data for pulpwood expressed in thousands of cords of 128 cu. ft.—roughwood basis. Pulpwood includes slabs, chips, & millwaste. [7] Estimate. *Sources: Bureau of the Census; American Paper Inst.* T.465

U.S. Foreign Trade in Woodpulp and Products In Thousands of Short Tons

	Exports							Imports							
Year	Wood Chips	Wood Pulp	Waste Fibrous Mater.[3]	Paper	Paper Board	Construction P. & B.	Converted Paper & Board	Pulpwood Chips	Wood Pulp	Waste Fibrous Mater.	Paper	Paper Board	Construction F. & B.	Paper & BD. Products	Total Value of Imports Mill. $[4]
1980	4,478	3,806	2,664	887	3,671	78	678	1,724	4,051	121	8,008	66	358	227	5,190
1981[1]	4,000	3,678	2,200	950	3,200	120	650	1,600	4,086	118	7,700	80	370	185	5,400
1982[1]		3,395							3,894						
1983[2]		3,674							4,093						
1984[2]		3,694							4,490						

[1] Preliminary. [2] Estimates. [3] Excludes rags for paperstock. [4] Paper base stocks, paper and manufactures. *Source: Dept. of Commerce* T.466

Paper and Board Production in the United States In Thousands of Short Tons[5]

	Paper							Paperboard					Construction[3]		
Year	Newsprint[5]	Coated (Shipments)	Tissue Paper	Uncoated Free Sheet (Shipments)	Coarse[2]	Sanitary	All Paper Total	Other Bleached Paperboard	Corrugating Material	Unbleac. Kraft	All Paperboard Total	Wet Machine Board	Construction (Paper)	All Construction Total	Total All Types
1980	4,239	4,673	4,375	8,326	5,327	4,298	30,164	1,794	5,864	14,249	31,143	138	1,369	4,390	65,834
1981	4,753	4,940	4,518	8,234	5,700	4,600	30,850	1,900	6,000	14,800	31,582	160	1,200	3,847	66,440
1982[1]	4,574	4,974	4,438	8,184			30,390				29,065				
1983[1]	4,688	5,696	4,789	9,095			32,841				32,177				
1984[4]	5,029	6,221	4,926	9,486			34,509				34,372				

[1] Preliminary. [2] Packaging & industrial converting paper. [3] Paper and board. [4] Estimate. [5] In Thousands of Metric Tons. *Source: Bureau of the Census* T.467

Average Price of Wood Pulp, Bleached Sulphate Softwood In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1980	440.95	440.95	440.95	473.35	473.35	473.35	476.97	476.97	476.97	476.97	476.97	476.97	467.05
1981	476.97	476.97	476.97	487.64	487.54	487.54	487.54	487.54	487.54	488.07	506.75	506.75	488.15
1982	408.1	406.9	406.9	392.4	386.6	383.8	362.0	357.9	354.4	347.9	347.2	346.9	375.0
1983	333.7	330.7	322.3	319.2	321.4	323.2	328.5	331.4	333.3	342.4	353.3	351.2	332.5
1984	354.8	385.0	387.8	417.8	439.2	440.2	439.1	437.3	434.3	431.1	423.2	405.1	416.2
1985	387.7	376.6											

Source: Bureau of Labor Statistics (0911–0211.09) T.469

Index Price of Shipping Sack Paper[1] Dec. 1973 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	168.2	168.2	171.0	178.6	178.6	178.6	178.6	178.6	178.6	185.7	187.3	187.3	178.3
1980	176.5	183.7	188.3	195.5	195.5	195.5	192.2	194.2	194.2	194.2	N.A.	194.2	191.3
1981	203.2	213.0	217.4	221.2	224.5	224.5	224.5	224.5	224.5	224.5	223.4	219.5	220.4
1982	219.5	222.2	220.7	220.7	216.3	207.2	207.2	207.2	207.2	213.9	213.9	213.9	214.2
1983	220.7	222.9	222.9	N.A.	222.9	226.7	226.7	226.7	230.7	230.7	231.8	231.8	226.8
1984	231.8	238.8	244.3	247.8	241.1	241.1	241.1	241.1	241.1	241.1	241.1	233.0	240.3
1985	233.0	233.0											

[1] Unbleached kraft. *Source: Bureau of Labor Statistics* (0913–0304.99) T.471

Peanuts and Peanut Oil

The 1984/85 world peanut (groundnut) crop was estimated by the USDA in early 1985 at 19.6 million metric tons (in-shell basis), up almost 5 percent from estimated 1983/84 output and only 2 percent below the record 1981/82 crop. China, the U.S., and Burma, among the major world peanut-producing countries, were all estimated to have record-large harvests. The harvest in India, the world's largest producer, was expected to drop by about 11 percent, but that country still accounted for about one-third of estimated world production. For the third consecutive year the harvest in Sudan was expected to continue well below average output before the 1982/83 season. Low prices were an important factor in reduced acreage, and drought kept production below average. Estimated production in Senegal was above the relatively low figure of the previous season.

The world crush of peanuts during the 1984/85 season was expected to increase by about 4 percent over the 1983/84 level, to around 11.64 million tonnes. However, the crush in India was expected to decline because of the reduced crop, dropping India's share of world crush to about 46 percent from 51 percent in the previous season.

The U.S. is the world's largest exporter of peanuts, and world exports were expected to increase by 4 percent in 1984/85 to around 1.06 million tonnes. U.S. exports were expected to be up about 11 percent. U.S. exports have been slow to recover from pre-drought trade levels due to increased competition from China and Argentina, weak economies in Europe and the strong dollar. South Africa was expected to reenter the export market after a two-year absence, but not until the latter part of the U.S. marketing year which began August 1, 1984. India's HPS (hand-picked select) peanut exports were estimated to be lower than in the previous season.

World peanut meal production in 1984/85 was estimated by the USDA at 4.38 million tonnes, up 4 percent from 1983/84. An expected production increase in China more than offset a reduction in Indian production prospects. India remains the world's largest exporter of peanut meal by a wide margin, and Poland was expected to continue as the most important world importer, followed by West Germany and the Netherlands. Total world domestic consumption of peanut meal in 1984/85 was estimated by the USDA at 4.95 million tonnes, up nearly 4 percent from the previous season. India and China are by far the most important users of peanut meal. World stocks are insignificant.

Global peanut oil production in 1984/85 was estimated at 3.36 million tonnes, up 5 percent from estimated 1983/84 output. The U.S., China, and Nigeria were expected to account for most of the increase. The major peanut oil exporters, Senegal and Brazil, were expected to increase their exports during the 1984/85 season. France was estimated to import nearly one-half of total world imports in 1984/85.

World food use of peanuts in the 1984/85 marketing year was estimated to increase 6 percent to about 5.8 million tonnes, paced by gains in China, the U.S., Indonesia, and Sudan.

U.S. 1984/85 beginning stocks of peanuts on August 1, 1984 were 29 percent smaller than a year earlier, but because of a record harvest, total U.S. peanut supplies were also record-large. The 1984 U.S. peanut crop totaled a record-high 4.43 billion pounds, up 34 percent from the previous year. Acreage planted increased 11 percent and harvested acreage was up 10 percent. Yield averaged a record-high 2,918 pounds per acre, 519 pounds above the 1983 yield.

Food use of peanuts in the U.S. during the 1984/85 season was estimated by the USDA at 975 thousand tonnes, the highest of any country, up from 919 thousand in 1983/84. Nearly one-half of the U.S. domestic food use in 1983/84 was in peanut butter, salted peanuts accounted for 21 percent, peanut candy—21 percent, roasting stocks—9 percent.

U.S. peanut meal production in the 1984/85 season was forecast by the USDA at 99 thousand tonnes, up from 72 thousand in 1983/84. Consumption of peanut meal was estimated at 101 thousand tonnes, up from 68 thousand and ending stocks at an insignificant 4 thousand tonnes.

Peanut oil production in the U.S. in 1984/85 was estimated at 75 thousand tonnes, 36 percent higher than in the previous season. Domestic consumption was forecast at 65 thousand tonnes versus 52 thousand in 1984/85, and ending stocks were projected at 22 thousand tonnes versus 14 thousand a year earlier.

U.S. Government Price Support

The USDA announced on February 14, 1985 that the national average support level for 1985-crop quota peanuts would be $559 per short ton, up $9 from the 1984 support level. The support level for "additional" peanuts (those grown in addition to a farm's quota or on a farm without a quota) was set at $148 per ton, down $37 from the 1984 level. Additional loan collateral peanuts from the 1985 crop will be sold by the Commodity Credit Corp. (CCC) for export edible use at no less than $425 per ton, unchanged from 1984.

World Production of Peanuts (in the Shell) In Thousands of Metric Tons

Crop Year	Argentina	Brazil	Burma	China (mainland)	India	Indonesia	Mali	Nigeria	South Africa	Senegal	Sudan	Taiwan	Thailand	United States	Zaire (Congo)	World Total
1978–9	672	465	384	2,377	6,208	708	107	341	179	1,053	815	92	102	1,793	295	17,832
1979–0	337	545	337	2,822	5,768	783	57	377	348	673	852	86	122	1,800	295	17,268
1980–1	243	310	431	3,601	5,005	791	92	560	309	521	707	82	130	1,045	320	16,210
1981–2	270	305	564	3,826	7,223	724	80	610	116	878	838	83	146	1,806	310	19,990
1982–3	250	250	541	3,916	5,282	679	80	580	89	1,109	497	63	145	1,560	310	17,460
1983–4[1]	307	220	591	3,951	7,284	709	90	500	62	568	460	98	135	1,495	310	18,874
1984–5[2]	275	270	600	4,810	6,500	739	90	650	200	678	500	90	130	2,008	310	20,053

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.* T.474

Salient Statistics of Peanuts in the United States

Crop Year	Acreage Planted (1,000 Acres)	Acreage Harvested For Nuts (1,000 Acres)	Average Yield Per Acre In Lbs.	Production Picked and Threshed 1,000 Lbs.	Season Farm Price ¢ Lb.	Farm Value Million Dollars	Thousand Pounds (Yr. Beg. Aug.) Exports Unshelled	Exports Shelled	Imports Unshelled	Imports Shelled
1972-3	1,533	1,486	2,203	3,274,761	14.5	475,367	4,369	385,588	1,039	443
1973-4	1,530	1,496	2,323	3,473,837	16.2	562,460	66,094	523,986	79	444
1974-5	1,520	1,472	2,491	3,667,604	17.9	657,987	17,703	548,083	127	466
1975-6	1,532	1,500	2,564	3,846,722	19.6	754,491	22,708	318,229	207	290
1976-7	1,549	1,518	2,464	3,739,190	20.0	746,675	24,765	580,496	432	66
1977-8	1,545	1,512	2,456	3,715,055	21.0	780,869	64,284	705,032	272	148
1978-9	1,541	1,509	2,619	3,952,384	21.1	833,885	94,617	745,591	53	161
1979-0	1,546	1,520	2,611	3,968,485	20.6	819,276	64,811	686,314		
1980-1	1,521	1,400	1,645	2,302,762	25.1	578,292	33,071	310,935		
1981-2	1,514	1,489	2,675	3,981,850	26.9	1,069,526	77,803	332,447		
1982-3	1,311	1,277	2,693	3,440,255	25.1	863,021	51,321	437,271		
1983-4[1]	1,411	1,374	2,399	3,295,530	24.1	794,336	39,509	502,179		
1984-5[2]	1,560	1,518	2,918	4,427,400	25.0	1,106,750				
1985-6[3]	1,536									

[1] Preliminary. [2] Estimate. [3] Prospective plantings. *Source: Economic Research Service, U.S.D.A.* T.475

Peanuts Supply & Disposition (Farmers' Stock Basis) & Support Program in the United States

Crop Year Begin. Aug. 1	Supply: Production[3]	Supply: Imports	Supply: Stocks Aug. 1	Supply: Total	Disposition: Exports & Shipments	Disposition: Crushed for Oil	Disposition: Seed, Feed & Residual	Domestic Food Use: Military	Domestic Food Use: Civilian	Civilian per Capita Lbs.	Government Support Program: Support Price ¢ per lb.	Additional ¢ per lb.	Amount Put under Support: Quantity Mil. Lbs.	Amount Put under Support: % of Prod.	Owned by CCC July 31 Mi. Lbs.
	Million Pounds														
1972-3	3,275	2	392	3,669	521	850	175	—	1,694	8.2	14.25		1,277	39.0	24
1973-4	3,474	1	429	3,904	709	683	119	—	1,840	8.8	16.42		1,029	29.6	0
1974-5	3,668	1	553	4,222	740	590	-54	—	1,800	8.5	18.30		1,072	29.2	552
1975-6	3,847	1	1,146	4,993	434	1,447	193	—	1,859	8.7	19.70		1,136	29.5	958
1976-7	3,739	1	1,060	4,800	783	1,108	513	—	1,789	8.4	20.70		854	22.8	0
1977-8	3,715	1	608	4,324	1,025	487	392	—	1,838	8.5	21.50		535	14.4	2
1978-9	3,952	1	581	4,534	1,141	527	284	—	1,996	9.2	21.00	12.5	515	12.9	—
1979-0	3,968	1	586	4,555	1,057	571	273	—	2,028	9.3	21.00	15.0	709	17.9	—
1980-1	2,303	401	628	3,332	503	446	321	—	1,647	9.0	22.75	12.5	337	14.6	—
1981-2	3,982	2	413	4,397	576	573	558	—	1,933		22.75	12.5	835	20.9	2
1982-3	3,440	2	757	4,199	681	342	256	—	2,056		27.50	10.0	539	15.7	—
1983-4[1]	3,296	2	864	4,162	775	393	234	—	2,090		27.50	9.3			
1984-5[2]	4,427	—	611	4,916	925	714	291	—	2,126		27.50	9.3			
1985-6															

[1] Preliminary. [2] Estimate. [3] Production is on a net weight basis. *Source: Economic Research Service, U.S.D.A.* T.476

U.S. Production of Peanuts (Harvested for Nuts) by States In Millions of Pounds

Crop Year	Alabama	Arkansas	Florida	Georgia	Louisiana	Mississippi	New Mexico	No. Car.	Oklahoma	So. Car.	Tennessee	Texas	Virginia	U.S. Total
1972	368.4	—	137.7	1,341.4	—	16.0	20.5	370.2	242.7	31.8	—	480.5	265.7	3,275
1973	400.0	—	150.4	1,344.0	—	16.6	18.9	466.5	253.7	30.1	—	471.2	322.4	3,474
1974	474.4	—	170.5	1,661.5	—	6.0	13.0	384.3	217.7	31.0	—	413.3	295.9	3,668
1975	535.6	—	177.7	1,726.6	—	13.5	20.2	373.7	232.3	29.5	—	463.6	284.6	3,847
1976	513.6	—	165.0	1,554.3	—	12.3	21.7	440.7	246.0	24.6	—	463.6	309.0	3,739
1977	589.1	—	170.5	1,499.1	—	11.6	25.4	444.1	267.6	31.2	—	394.5	293.0	3,715
1978	551.8	—	182.1	1,725.3	—	13.1	24.1	465.4	207.0	35.7	—	436.5	311.6	3,952
1979	584.9	—	179.9	1,704.8	—	12.4	25.3	378.5	264.0	32.3	—	533.0	253.5	3,968
1980	265.0	—	143.0	994.6	—	7.5	22.4	291.3	140.2	14.3	—	293.3	129.8	2,303
1981	602.7	—	178.0	1,655.5	—	12.7	24.9	555.6	189.3	39.0	—	393.3	330.8	3,982
1982	522.2	—	153.0	1,517.5	—	—	25.2	417.2	174.6	30.0	—	325.1	275.5	3,440
1983	454.5	—	166.8	1,568.0	—	—	25.6	318.3	176.5	25.0	—	362.3	198.6	3,296
1984[1]	648.6	—	257.4	2,162.4	—	—	32.5	449.5	191.1	39.2	—	365.5	281.3	4,427

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.477

PEANUTS AND PEANUT OIL

Disappearance and Reported Uses of Peanuts and Products in the U.S. In Millions of Pounds

	Apparent Disappear.[2] (Milled Peanut Prod.)						Reported Used (Shelled Peanuts—Raw Basis)							
	Shelled Peanuts						Edible Grades Used in							
							Peanut							
Year Begin. Aug. 1	Edible Grades	Oil Stock[3]	Total All Grades	Cleaned (In Shell)	Crude Peanut Oil[4]	Cake & Meal[4]	Candy	Salted	Sandwich Spread	Butter[5]	Other Products	Total	Oil Stock Crushed For Oil, Cake & Meal	Total All Grades
1975–6	1,555	852.2	2,407	142.0	471.3	605.8	239.7	301.6	21.0	648.1	16.0	1,226	1,088	2,314
1976–7	1,700	783.2	2,483	163.2	342.9	460.7	235.0	253.8	24.2	617.9	17.8	1,149	833.2	1,982
1977–8	1,895	461.2	2,356	190.6	179.1	208.9	235.2	274.2	28.2	623.8	18.7	1,180	366.2	1,546
1978–9	1,955	426.9	2,382	210.9	161.6	227.9	268.4	291.6	28.1	664.9	19.1	1,272	396.0	1,668
1979–0	1,979	503.9	2,483	201.4	175.3	228.4	258.4	284.9	30.3	700.0	19.3	1,293	429.1	1,722
1980–1	1,097	306.0	1,403	120.3	143.5	189.6	237.9	205.5	24.1	588.6	19.7	1,076	335.5	1,411
1981–2[1]	1,096	377.6	2,283	200.7	155.7	233.7	255.9	278.0	22.7	653.7	15.3	1,226	431.5	1,657
1982–3[6]				200		145.5	284	308	22	678	17	1,309		
1983–4[6]						149.9	298	302	24	671	16	1,311		

[1] Preliminary. [2] Includes in transit, exports and domestic use, except for oil stock for which disappearance is assumed to equal crushings. [3] Graded & ungraded oil stock only. [4] Relates to peanut oil mills only. [5] Peanuts used in peanut butter by mfrs. for own use in candy is included under peanut candy. [6] Estimate. *Source: Statistical Reporting Service, U.S.D.A.* T.481

Visible Supply (Stocks) of Peanuts and Products on Hand in the U.S. In Millions of Pounds

	Farmers' Stock Peanuts[2]				Shelled Edibles								
Year Begin. Aug. 1	Virginias	Runners	Spanish	Total	Virginias	Runners	Spanish	Total	Shelled Oil Stock[3]	Total Shelled	Roasting Stock[5]	Crude Peanut Oil[4]	Peanut Cake & Meal[4]
1976–7	4.0	244.0	1.9	250.0	68.5	159.9	87.2	315.7	83.2	398.8	30.6	22.9	5.9
1977–8	2.0	49.4	3.0	54.4	62.1	255.0	55.4	372.5	29.8	402.3	18.2	42.6	11.7
1978–9	8.0	20.0	.6	28.7	62.5	251.6	44.8	477.4	49.7	581.4	25.6	14.5	10.9
1979–0	7.2	5.9	.3	13.5	87.7	214.2	46.1	462.8	61.8	586.3	48.2	17.2	1.0
1980–1	8.4	44.0	11.0	63.4	67.9	265.4	38.4	494.3	39.2	627.5	30.6	21.6	8.8
1981–2	14.1	14.1	.2	28.3	56.6	181.0	30.7	356.8	13.8	413.3	14.4	15.9	7.3
1982–3[1]	24.3	60.6	0	84.9	129.0	273.3	48.2	599.1	27.4	756.6	45.2	4.3	2.3
1983–4[1]				51.4				715.3	25.0	864.0	71.8		
1984–5[1]				8.8				535.2	44.0	611.3	23.3		

[1] Preliminary. [2] Excludes stocks on farms, but includes stocks owned or held for account of C. C. C. [3] Includes ungraded or straight run peanuts. [4] Relates to peanut oil mills only. [5] Cleaned & unshelled. *Source: Agricultural Marketing Service, U.S.D.A.* T.478

World Imports of Peanut Oil (Crude & Refined) into Specified Countries In Thousands of Metric Tons

Crop Year	Algeria	Australia	Austria	Belgium-Lux.	Venezuela	Canada	Dominican Rep.	France	West Germany	Hong Kong	Italy	Singapore	Netherlands	Switzerland	Portugal	United Kingdom	Total
1976	6	2	2	31	38	7	16	218	37	20	22	3	8	—	—	20	
1977	5	4	2	29	64	7	15	217	37	23	31	2	8	—	—	16	
1978–9	—	1	2	35	66	6	2	221	40	25	46	2	21	20	—	15	454
1979–0	—	2	2	42	1	5	—	247	39	29	42	2	34	20	—	17	490
1980–1	—	—	3	33	—	5	—	161	26	28	20	3	23	10	—	12	327
1981–2		1		44		4		194	28	26	34		21	15		15	390
1982–3		2		57		4		223	25	28	37		24	11		17	453
1983–4[1]		0		55		4		130	20	25	20		20	8		15	316
1984–5[2]		3		50		3		150	20	25	34		20	15		15	341

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.482

Production, Consumption, Stocks and Foreign Trade of Peanut Oil in the U.S. In Millions of Pounds

	Production		Consumption		Stocks—Dec. 31			Exports	
Year	Crude	Refined	In Refining	In End pdt's.	Crude	Refined	Imports for Consumption	Crude	Refined
1976	486.6	259.9	267.8	249.7	192.3	17.4	1.2	9.7	95.7
1977	252.0	249.7	257.2	243.9	91.5	7.6	—	71.8	9.7
1978	145.2	171.9	178.0	169.0	7.3	4.7	—	32.9	7.6
1979	183.0	130.1	134.3	120.4	22.6	7.3		14.4	1.2
1980	182.4	170.6	166.7	165.3	7.5	4.3		46.0	1.6
1981	141.6	122.8	133.5	115.3	12.9	5.2		38.1	2.7
1982[1]	N.A.	148.0	162.1	150.2	N.A.	4.5		45.5	.6
1983[1]	N.A.	165.0	178.5	169.4	N.A.	2.9		67.4	.4
1984[1]	108.2	136.4	144.6	131.9	11.1	3.3			

[1] Preliminary. *Source: Bureau of Census* T.483

Utilization of Peanut Oil in the United States In Thousands of Pounds

Year Begin. Aug.	Shortening	Margarine	Cooking and Salad Oils	Other Edible	Total Food Uses	Non-Food Uses	Factory Consumption	Foots & Loss	Domestic Disappearance
1974–5	13,000	—	87,000	44,000	145,000	8,000	116,000	5,000	153,000
1975–6	27,000	28,000	150,000	59,000	264,000	12,000	232,000	9,000	276,000
1976–7	29,000	27,000	143,000	26,000	225,000	8,000	218,000	6,000	232,000
1977–8	20,000	—	211,000	−47,000	183,000	11,000		8,000	194,000
1978–9	16,000		96,000						120,000
1979–0[1]			148,000						193,000
1980–1[2]			100,000						150,000
1981–2[2]			136,000		139,000				
1982–3[2]			157,000		174,000				
1983–4[2]			121,000		130,000				

[1] Preliminary. [2] Estimate. *Source: Bureau of the Census* T.484

Average Price Received by Producers in U.S. for Peanuts in the Shell In Cents Per Pound

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average[1]
1974–5	17.9	18.1	17.6	17.8	17.6	—	—	—	—	—	—	18.4	17.9
1975–6	19.7	19.8	19.6	18.7	—	—	—	—	—	—	—	19.1	19.6
1976–7	19.8	19.9	20.0	20.0	20.2	—	—	—	—	—	—	21.3	20.0
1977–8	20.9	20.9	20.4	20.4	21.0	—	—	—	—	—	—	21.2	21.0
1978–9	20.8	21.4	21.0	20.8	21.2	—	—	—	—	—	—	21.2	21.1
1979–0	21.4	20.3	20.4	20.4	20.4	—	—	—	—	—	—	—	20.6
1980–1	22.5	23.2	27.9	37.3	47.7	—	—	—	—	—	—	—	25.1
1981–2	28.9	26.7	25.1	25.8	24.9	—	—	—	—	—	—	25.7	26.9
1982–3	25.1	24.9	25.3	26.1	22.9	—	—	—	—	—	—	27.1	25.1
1983–4[2]	25.2	24.3	24.5	25.4	27.8	—	—	—	—	—	—	27.3	24.1
1984–5[2]	26.3	24.5	25.6	26.3	24.1	—	—						

[1] Weighted average by sales. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.479

Crude Peanut Oil Produced[2] in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	17.7	12.8	12.1	13.3	17.2	22.8	29.2	29.1	33.6	34.6	27.6	25.3	275.3
1976	26.6	32.6	44.3	51.1	56.9	66.5	47.6	41.5	39.0	31.5	24.6	24.5	486.6
1977	20.7	24.7	35.5	33.0	32.8	30.1	24.7	22.4	6.9	6.1	10.5	4.4	252.0
1978	9.7	9.2	11.1	18.0	18.1	18.1	10.4	16.6	7.7	10.3	6.3	9.5	145.2
1979	11.7	14.2	22.5	18.6	23.0	15.5	8.2	10.8	4.5	4.5	6.1	7.7	183.0
1980	6.2	15.1	16.7	25.9	30.7	22.9	23.5	21.2	5.9	2.1	6.3	5.9	182.4
1981	6.1	6.0	10.5	17.3	19.1	19.5	13.6	9.8	5.3	9.7	12.0	12.7	141.6
1982	11.3	11.1	19.4	26.3	22.3	19.0	15.0	11.8	N.A.	N.A.	N.A.	N.A.	N.A.
1983	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1984[1]	12.1	13.3	10.8	12.5	10.1	8.9	5.1	5.3	4.3	9.9	8.6	7.3	108.2
1985[1]	9.8	13.9											

[1] Preliminary. [2] Not seasonally adjusted. *Source: Statistical Reporting Service, U.S.D.A.* T.473

Average Price of Domestic Crude Peanut Oil (in Tanks) F.O.B. Southeast Mills In Cents Per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1974–5	52.6	50.9	49.8	46.6	45.9	40.5	39.3	36.6	40.9	47.3	52.7	49.3	46.6
1975–6	42.2	39.3	35.3	35.4	37.8	38.9	35.4	31.0	33.5	38.3	36.4	38.0	37.1
1976–7	38.0	37.3	38.9	40.3	41.0	40.8	43.6	35.5	34.7	29.8	29.2	30.7	36.6
1977–8	34.1	33.4	42.8	47.3	44.9	41.2	46.6	48.1	47.1	44.5	44.9	48.6	43.6
1978–9[1]	45.1	49.7	46.0	51.4	47.4	37.9	40.9	41.2	36.5	39.0	37.0	35.5	42.3
1979–0	34.4	31.1	29.5	25.9	25.8	22.9	20.5	22.4	23.1	26.9	33.2	36.0	27.6
1980–1	35.8	48.7	49.1	47.7	39.3	34.1	34.0	37.1	38.0	38.1	43.2	40.3	40.5
1981–2	34.5	34.5	30.9	27.3	31.4	23.3	29.1	29.9	26.2	24.7	22.7	22.5	28.1
1982–3	22.9	25.2	26.1	25.6	25.7	24.1	25.1	26.4	26.4	26.7	30.7	50.5	28.0
1983–4	50.7	48.8	48.1	47.3	46.5	48.4	52.6	58.2	59.1	57.7	54.8		
1984–5													

[1] Prices prior to 1978–9 are for REFINED in New York. *Source: Agricultural Marketing Service, U.S.D.A.* T.485

Pepper

During 1984, the gap between increasing consumption of pepper and declining world production widened considerably. Unfavorable weather during the growing seasons in Indonesia, India and Brazil influenced the dropping of world supplies below the quantity of pepper demanded and virtually eliminated the surpluses that were built up due to high production in the early years of this decade. Because pepper vines generally produce their first crop about three years after planting, this situation was expected to continue through 1987.

U.S. imports of black unground pepper amounted to 34,505 tonnes in 1984 compared with 28,346 tonnes in the previous year. The value of these imports was estimated at $56.7 million, nearly twice the value of 1983 imports despite the strong dollar. This was directly attributable to tight world supplies. About 18,000 tonnes, or just over one-half of all U.S. imports of unground black pepper during 1984 originated in Indonesia, a proportion that was roughly the same as Indonesia's share of the U.S. market in 1983. India supplied 4,881 tonnes of unground black pepper to the U.S. during 1984. U.S. imports of unground black pepper from South America during 1984 amounted to 10,369 tonnes, all of which was supplied by Brazil. Only small quantities of unground black pepper came to the U.S. from Sri Lanka (Ceylon), mainland China, and Yemen.

In 1984, U.S. imports of unground white pepper totaled 3,643 tonnes, up only slightly from 3,130 tonnes imported in 1983. Nearly 70 percent of U.S. unground white pepper, or 2,586 tonnes, came from Indonesia. Once again, Brazil supplied the total amount of unground white pepper that came to the U.S. from South America—540 tonnes compared with 571 tonnes shipped from Brazil in 1983. An estimated 61 tonnes of unground white pepper was shipped to the U.S. from India during 1984, and shipments from Spain amounted to 18 tonnes. The Federal Republic of Germany supplied 17 tonnes of unground white pepper to the U.S. in 1984.

Trade sources expected world production of pepper to decline about 12 percent to around 105,000 tonnes in 1985. Global pepper consumption of pepper in 1985 was forecast at nearly 125,000 tonnes.

World Exports of Pepper (Black & White) In Metric Tons & N.Y. Spot Prices in ¢ Per Lb.

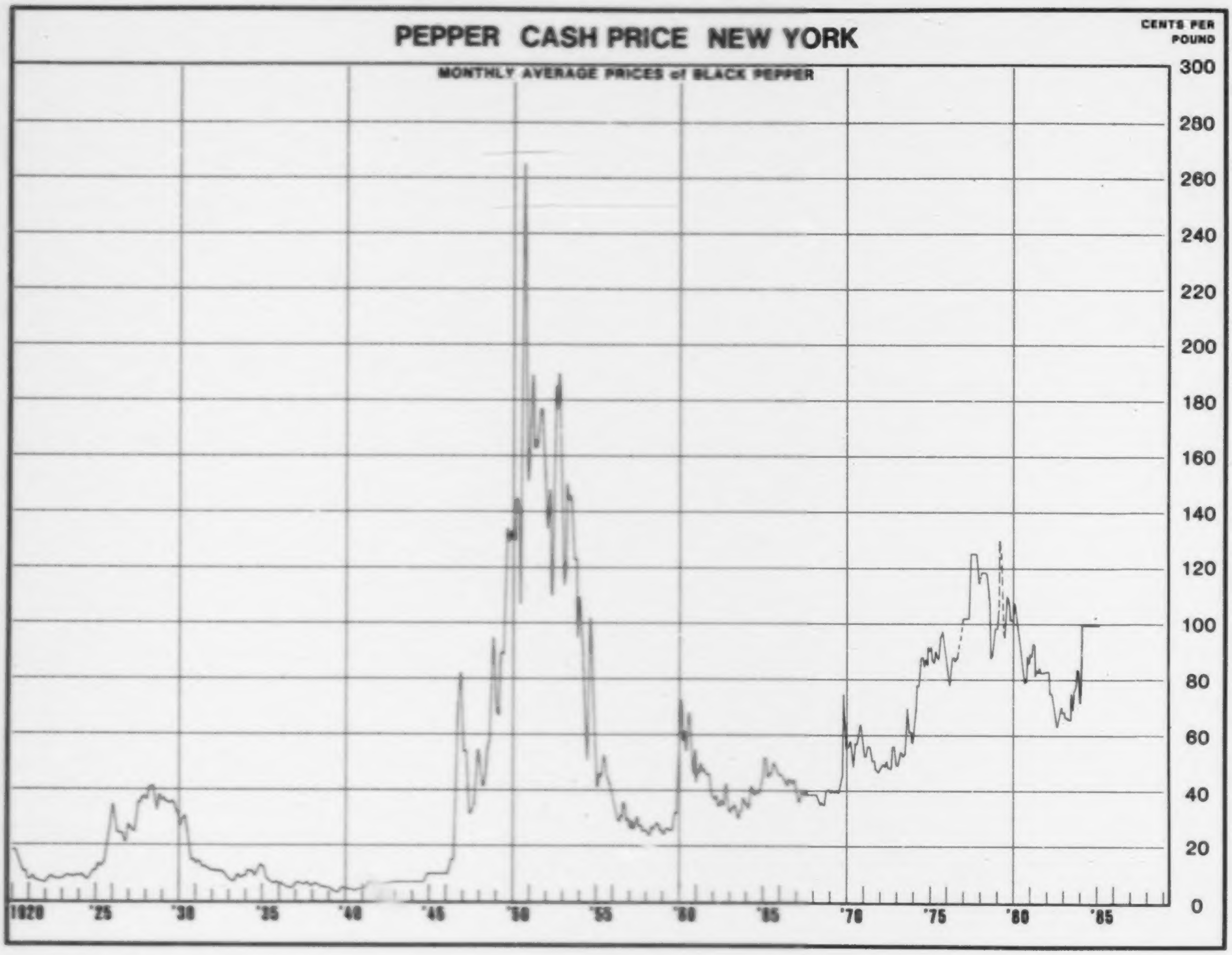
	Exports							Spot Prices					
								Indonesian		Brazilian		Indian	
Year	Brazil	India	Indonesia	Singapore[2]	Madagascar	Sarawak	Sri Lanka	Lampong Black	Muntok White	Black	White	Malabar Black	Tellicherry[3]
1973	13,761	27,942	25,452		3,193	22,830	518						
1974	15,491	28,569	15,188		2,241	28,933	337						
1975	17,944	24,399	14,525		3,461	29,815	96						
1976	19,986	17,813	29,481		2,958	34,850	10						
1977	17,099	25,892	30,856		3,748	26,795	635						
1978	29,505	19,370	37,090	40,904	1,566	30,780	1,205						
1979	25,186	20,545	24,986	38,395	1,894	36,118	876	93.7	132.6	91.9	129.7	93.9	112.2
1980	31,964	26,795	29,345	33,233	1,674	30,709	945	87.6	120.9	83.3	116.3	87.6	102.5
1981	46,895	18,636	33,996	30,098	1,440	28,696	2,042	68.8	101.5	62.3	100.0	80.4	103.8
1982	44,539	20,454	36,327	26,459	1,796	25,010	1,238	66.3	84.8	62.1	84.7	69.2	83.7
1983[1]	30,363	27,982	45,061	N.A.	2,801	23,481	1,120	72.1	96.7	65.5	96.2	76.0	86.5
1984								98.6	153.9	96.5	152.8	98.9	115.2

[1] Preliminary. [2] Reexports. *Source: Foreign Agricultural Service, U.S.D.A.* T.486

United States Imports of Pepper from Specified Countries In Metric Tons[2]

	Black Pepper										White Pepper						
Year	Brazil	Mexico	Sri Lanka (Ceylon)	Spain	India	Indonesia	Malaysia	Singapore	China	Total	Brazil	China	W. Germany	Indonesia	Malaysia	Singapore	Total
1973	8,630		302		9,690	29,627	544	849		49,827	730.9	—		4,446	58.3	330.1	5,588
1974	6,914		90		16,277	19,627	5,415	1,283	—	49,781	121.4	—		5,627	189.8	155.7	6,327
1975[2]	6,436		41		6,708	4,613	4,487	773	10	23,156	170	—		1,514	63	59	1,813
1976	6,609		—		359	11,774	4,037	1,321	3	24,128	53	—		2,118	56	128	2,362
1977	5,282		157		4,890	9,466	3,140	478	—	23,540	40			2,765	42	63	2,920
1978	10,472		186		1,880	10,595	2,293	604	6	26,142	285	—		1,994	64	28	2,382
1979	9,704		281	—	627	10,898	2,644	156	61	24,482	414	10	—	2,159	51	94	2,756
1980	10,075		153	17	3,993	11,408	3,640	296	1	29,644	509	35	—	2,419	100	131	3,194
1981	14,716	31	295	—	559	12,615	273	37	21	28,563	763	1	—	1,561	43	75	2,503
1982	14,887	10	172	—	848	11,620	172	63	3	27,811	423	1	5	2,194	—	95	2,721
1983	13,047	—	256	—	2,498	12,327	25	120	3	28,346	571	17	6	2,460	—	65	3,130
1984[1]	10,369	—	345	22	4,881	18,024	180	100	462	34,505	540	202	17	2,586	59	95	3,643

[1] Preliminary. [2] Data prior to 1975 are in THOUSANDS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.* T.487



Average Black Pepper Prices in New York (Lampong-Whole Pepper) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	49.0	49.5	49.0	49.0	51.0	48.5	48.5	48.0	56.0	56.0	52.0	49.3	50.5
1973	49.3	52.0	54.0	53.0	52.5	53.0	65.0	70.0	61.0	61.0	57.5	61.0	57.4
1974	64.0	70.0	78.0	78.0	85.0	88.0	88.0	85.0	87.5	85.5	92.0	91.0	82.7
1975	91.5	87.0	86.0	90.0	89.0	87.5	88.5	95.0	97.0	94.0	87.5	85.0	89.8
1976	81.0	79.0	77.5	88.0	88.0	87.0	87.5	87.5	N.A.	N.A.	N.A.	102.0	86.4
1977	102.0	102.0	102.0	102.0	125.0	125.0	125.0	125.0	125.0	125.0	114.5	N.A.	115.7
1978	118.5	118.5	118.5	118.5	117.5	109.0	107.5	88.0	88.5	95.5	98.5	98.5	106.4
1979	105.0	N.A.	130.0	N.A.	N.A.	95.0	97.0	110.0	108.0	108.0	102.0	101.3	106.3
1980	108.0	101.0	96.3	93.0	87.0	84.3	82.8	79.0	79.0	88.0	86.5	89.3	89.5
1981	88.5	93.3	92.0	81.0	83.0	82.3	84.0	82.5	82.3	82.3	82.5	82.5	84.7
1982	82.5	82.5	75.0	75.0	70.0	69.0	67.0	63.0	69.0	70.5	68.5	68.3	71.7
1983	68.3	66.5	66.3	65.5	65.5	65.5	75.0	69.3	76.3	77.3	83.5	83.5	71.9
1984	83.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	98.2
1985	99.5												

Source: Bureau of Labor Statistics (0289–0131) T.488

Petroleum

Accelerated world economic growth combined with lessened gains in energy efficiency, resulted in a rise in worldwide demand for energy. Some of this increased demand was met by increases in production on the part of the Organization of Petroleum Exporting Countries (OPEC). However, energy prices were generally weak throughout 1984 because some OPEC countries evidently exceeded their production quotas while some non-OPEC nations actually increased their output. Weak oil prices caused the composite real price of U.S.-produced fossil fuels to fall in 1984 even as aggregate U.S. consumption, production and imports increased.

U.S. petroleum consumption increased significantly in 1984. However, domestic production of crude oil increased by only a small extent, and most of the increase in consumption was accounted for by increased imports. U.S. domestic crude oil production totaled around 8.7 million barrels per day, virtually unchanged from the levels of the preceding several years.

The increase in petroleum consumption of nearly 5 percent in 1984 was the first in six years, and this halted the decline in petroleum imports that had been in effect since 1980. Gross imports of crude oil and petroleum products increased from five million barrels a day in 1983 to nearly 5.7 million in 1984, an increase of about 12 percent. However, the 1984 import level was only about two-thirds of the amount of oil imported in the peak year of 1977. Petroleum product imports increased at a faster rate than crude oil imports, and the product share of total imports increased (to over one third) for the fifth successive year. Exports of crude oil and petroleum products, which remained small relative to imports, fell from 720,000 barrels a day in 1983 to 660,000 barrels a day in 1984. Among the various types of petroleum products, residual fuel oil was the only one whose consumption figure remained unchanged in 1984. The biggest gains in demand were for distillate fuel oil and jet fuel. Gasoline consumption rose by 2 percent.

December 31, 1984, U.S. stocks of crude oil and petroleum products were 1.56 billion barrels (revised) compared with 1.45 billion in 1983: Total crude stocks rose 10 percent to 794 million barrels from 723 million a year earlier. Distillate fuel oil stocks increased 15 percent to 161 million barrels, and total motor gasoline stocks were up 9 percent to 243 million barrels. Total domestic field production of crude oil and petroleum products in 1984 averaged 10.44 million barrels per day, the greatest yearly average since 1974, up from 10.30 million barrels per day for the 1983 average. Increased production in the first years of the '80's in response to high prices for petroleum prices contributed to weak 1984 prices.

1984 saw at least a partial eclipse of OPEC as a major force in the determining of petroleum prices. Formerly, non-OPEC producing countries used OPEC's official prices as a guide in determining their own prices for oil. However, growing stocks of petroleum and slumping world demand soon meant that OPEC's relatively inflexible pricing system was fighting the market for spot energy. OPEC succumbed to market pressure in early 1983 when it lowered its benchmark price of Saudi Arabian light crude by $5 per barrel to $29. At the time, production ceilings for OPEC in the aggregate were reestablished, and they were likewise reestablished for individual member countries. Contract price quotations remained unchanged in 1984. However, continued flagging demand and weakening prices kept OPEC on the defensive throughout the year. The pressure on the cartel was further increased by price competition from non-OPEC producing countries. In the last quarter of 1984, for example, the British National Oil Corporation (BNOC) announced a reduction in its posted North Sea price from $30 per barrel to $28.65. Although OPEC's benchmark price held steady during 1984, this kind of price competition was reflected in cuts in production quotas for OPEC members and an increasing flow of supplies onto the world market. Late in 1984, OPEC production was estimated to have exceeded its self-imposed quota of 17.5 million barrels per day by 500,000 barrels. Early in 1985 OPEC members agreed to narrow the pricing differential between light and heavy crudes to $2.40 and reduce the Arab light marker price to $28 from $29 per barrel. A 16 million barrels per day production ceiling was also agreed upon.

World oil prices were expected to show little change in 1985. This projection assumed that OPEC would adjust its production to levels consistent with stable prices. Also, it assumed that political and military developments in the Middle East would not impede the flow of oil from that region.

Futures Market

Crude petroleum futures are traded on the New York Mercantile Exchange (NYMEX).

World Production of Crude Petroleum, by Specified Countries In Thousand Barrels Per Day

Year	Algeria	Canada	China	Libya	Iran	Iraq	Kuwait	Nigeria	Mexico	Indonesia	Un. King.	USSR	Saudi Arabia	United States	Venezuela	World Total
1978	1,161	1,313	2,082	1,983	5,242	2,563	2,131	1,897	1,209	1,635	1,082	11,185	8,301	8,707	2,166	60,057
1979	1,154	1,496	2,122	2,092	3,168	3,477	2,500	2,302	1,461	1,591	1,568	11,460	9,532	8,552	2,356	62,535
1980	1,012	1,435	2,114	1,787	1,662	2,514	1,656	2,055	1,936	1,577	1,622	11,773	9,900	8,597	2,168	59,538
1981	805	1,285	2,012	1,140	1,380	1,000	1,125	1,433	2,313	1,605	1,811	11,909	9,815	8,572	2,102	55,900
1982	710	1,372	2,045	1,150	2,214	1,012	823	1,295	2,748	1,339	2,065	12,080	6,483	8,649	1,895	53,458
1983[2]	675	1,450	2,120	1,076	2,426	1,005	1,064	1,241	2,686	1,385	2,291	12,034	5,086	8,688	1,768	52,981
1984[1]	642	1,407	2,208	1,072	2,187	1,203	1,117	1,382	2,758	1,468	2,492	11,827	4,649	8,757	1,811	53,719

[1] Estimate. [2] Preliminary. *Source: Energy Information Administration* T.489

United States Crude Oil[1] Supply & Disposition

Yearly Average		Supply									Disposition		Ending Stocks[2]		
		Field Production		Imports			Stock Withdrawal[3]		Unaccounted for Crude Oil						
		Total Domestic	Alaskan	Total	SPR[4]	Other	SPR[4]	Other			Refinery Inputs	Exports	Total	SPR[5]	Other Primary
		Thousands barrels per day											Million barrels		
1979		8,552	1,401	6,519	67	6,452	– 67	– 81	– 11		14,648	235	430	91	339
1980		8,597	1,617	5,263	44	5,219	– 45	– 52	34		13,481	287	466	108	358
1981		8,572	1,609	4,396	256	4,141	–336	46	83		12,470	228	594	230	363
1982		8,649	1,696	3,488	165	3,323	–174	38	71		11,774	236	644	294	350
1983		8,688	1,714	3,329	234	3,096	–234	20	114		11,685	164	723	379	344
1984		8,757	1,735	3,403	197	3,205	–195	– 1	337		12,055	181	794	451	344
1985	January	8,929	1,788	2,700	223	2,478	–223	241	23		11,456	144	793	457	336
	February	8,928	1,787	2,338	82	2,257	– 82	380			11,472		780	460	320

[1] Includes lease condensate. [2] Stocks are totals as of end of period. [3] A negative number indicates an increase in stocks and a positive number indicates a decrease. [4] Strategic Petroleum Reserve. [5] Stocks of Alaskan crude oil in transit were included beginning in January 1981. Stock withdrawals are calculated using new basis levels. *Source: Energy Information Administration* T.489a

Production[1] of Crude Petroleum in the United States In Millions of Barrels of 42 Gallons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	262.7	238.7	266.6	256.6	266.6	252.9	259.3	265.0	255.7	267.3	262.8	267.0	3,121
1980	268.9	252.4	269.6	260.5	267.7	256.6	265.0	260.8	258.6	264.5	254.9	266.8	3,146
1981	264.7	240.9	267.0	256.7	263.5	258.9	263.5	266.1	258.1	265.4	257.6	266.1	3,129
1982	263.8	243.7	268.7	257.7	269.2	259.4	268.4	267.6	261.0	269.7	260.9	266.5	3,157
1983[2]	267.7	242.5	269.0	260.6	269.2	260.3	267.7	269.1	263.5	271.9	263.1	260.3	3,171
1984[2]	268.4	253.0	270.3	260.6	271.3	262.3	271.8	272.2	262.8	274.3	265.4		

[1] Represents oil transported from producing properties, plus that remaining on properties & consumed on leases. [2] Preliminary. *Source: Bureau of Mines* T.500

United States Production of Gasoline[1] In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	226.0	194.8	207.3	204.6	212.0	211.8	218.9	215.4	200.8	202.9	201.8	218.0	2,515
1980	217.5	200.2	203.4	189.5	196.8	198.1	201.8	201.4	192.4	191.2	194.9	206.9	2,394
1981	209.1	177.3	193.3	184.2	191.0	187.7	199.8	206.2	198.0	200.2	197.7	205.0	2,349
1982	191.8	165.7	186.5	183.4	196.7	203.5	210.7	200.1	196.5	194.9	188.9	203.2	2,322
1983[2]	187.3	164.3	183.4	186.7	198.7	200.3	208.8	203.7	199.3	192.7	199.7	196.1	2,323
1984[2]	187.7	184.1	198.2	196.5	207.0	199.6	201.8	200.4	197.0	199.0	202.0		

[1] Gasoline and naphtha from crude petroleum and natural gasoline used at refineries. [2] Preliminary. *Source: Bureau of Mines* T.502

United States Domestic Consumption of Gasoline In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	212.5	203.9	225.2	212.7	224.8	216.5	215.9	228.8	207.8	218.8	205.0	209.5	2,582
1980	196.8	192.4	199.6	204.9	209.8	200.9	210.2	207.3	196.5	207.8	187.9	206.3	2,421
1981	200.1	177.1	196.4	199.1	205.9	212.0	212.7	206.9	200.6	204.9	191.9	207.9	2,416
1982	185.5	174.0	201.2	207.7	207.1	206.1	211.4	206.1	196.9	198.8	197.6	203.6	2,396
1983[1]	185.8	169.4	212.8	195.8	203.5	211.1	210.7	216.0	202.8	205.2	198.8	212.9	2,427
1984[1]	194.7	181.5	202.3	201.2	214.2	213.9	213.3	221.7	199.2	209.2	204.8		

[1] Preliminary. *Source: Bureau of Mines* T.503

Stocks of Finished Gasoline on Hand in the United States, at End of Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	260.7	275.1	273.7	262.0	251.4	235.9	222.0	219.0	211.5	219.2	216.1	223.2
1979	260.0	255.4	242.7	239.3	231.0	234.2	244.1	235.2	232.3	221.0	223.3	239.9
1980	264.9	277.3	285.9	275.1	266.1	267.7	263.8	262.2	261.0	249.1	259.9	213.5
1981	229.1	232.4	234.5	225.2	214.8	196.1	187.9	190.9	193.4	193.1	203.3	206.2
1982	215.9	211.2	200.7	181.0	175.6	179.5	185.0	187.6	193.3	194.6	191.9	196.8
1983[1]	210.9	209.9	186.2	185.3	189.3	185.8	192.3	187.4	191.8	189.5	198.4	187.8
1984[1]	188.0	199.3	205.5	210.0	213.0	206.5	202.6	189.0	196.9	195.6	201.0	

[1] Preliminary. *Source: Bureau of Mines* T.504

Crude Petroleum Refinery Operations Ratio[1] In Percent of Capacity

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	86	84	83	84	84	86	87	86	84	83	84	85	85
1980	82	80	77	76	75	77	74	73	74	71	73	76	76
1981	72	71	68	66	67	68	67	71	68	67	68	69	69
1982	67	65	66	66	69	75	75	71	74	71	71	70	70
1983[2]	68	65	66	69	72	75	75	74	78	73	75	70	72
1984[2]	73	76	75	75	77	77	76	78	78	76	77		

[1] Based on the ratio of the daily average crude runs to stills to the rated capacity of refineries per day. [2] Preliminary. *Source: Bureau of Mines*

T.496

Production of Major Refined Petroleum Products in Continental U.S. In Millions of Barrels

Year	Asphalt[2]	Aviation Gasol.	Fuel Oil Distillate	Fuel Oil Residual	Gasoline[4]	Petro-Chemical Feedstocks	Special Naphthas	Miscel. pdt's.	Jet Fuel	Kerosene	Liquified Gases[7] (For Fuel)	Lubricants	Liquefied Gases[3] Total	Liquefied Gases[3] at L.P.G.[5]	Liquefied Gases[3] at L.R.G.[6]
1978	172.9	13.9	1,156	608.6	2,631	223.1	36.7	47.0	353.9	56.3	87.5	69.5	561.1	431.5	129.5
1979	168.8	13.7	1,151	615.6	2,515	252.1	36.6	42.7	369.2	66.8	84.7	71.0	568.0	443.9	124.1
1980	141.2	12.8	974.1	578.4	2,394	254.6	36.5	38.5	365.6	50.1	87.0	65.1	561.8	440.9	120.8
1981	123.5	11.5	953.8	482.1	2,349				353.2	43.6		60.6	573.4	458.6	114.8
1982	119.4	8.9	951.3	390.4	2,322				357.0	42.0		51.6	557.5	459.0	98.5
1983	135.7	9.2	896.5	310.9	2,323				373.2	40.0		53.8	599.2	479.6	119.6
1984[1]	140	10	900	320	2,400				390	40		55		490	125

[1] Estimated. [2] 5.5 barrels = 1 short ton. [3] Includes ethane & ethylene. [4] Finished. [5] Gas processing plants. [6] Refineries. [7] Liquefied refinery gases. *Source: Bureau of Mines*

T.490

Stocks of Petroleum & Products in the United States on January 1 In Millions of Barrels

Year	Crude Petroleum	Strategic Reserve	Refined Products Total	Asphalt[2]	Aviation Gasol.	Fuel Oil Distillate	Fuel Oil Residual	Finished Gasoline	Petro-Chemical Feedstocks	Jet Fuel	Kerosene	Liquefied Gases[3]	Lubricants	Road Oil	Wax[4]	Unfinished Oils (Net)[5]
1978	347.7	7.5	842.5	18.7	3.0	250.3	90.0	260.7	3.9	34.5	18.1	136.3	12.1	.3	.6	113.2
1979	376.3	66.9	784.6	20.9	2.8	216.5	90.2	240.8	4.4	33.7	14.3	132.0	12.2	.3	.8	
1980	430.3	91.2	778.6	18.9	2.7	228.7	95.6	239.9	4.0	38.5	15.8	110.7	12.5	.3	.7	117.7
1981	482.9	107.8	745.3	18.8	2.3	205.4	91.5	213.5	5.9	42.4	11.4	128.0	13.6	.3	.5	
1982	593.8	230.3	712.5	19.6	2.7	191.5	78.0	206.2		41.1	11.0	134.7	14.3			176.8
1983	643.6	293.8	628.3	15.9	2.3	178.6	66.2	196.8		36.8	10.4	94.0	12.5			158.1
1984[1]	722.9	379.1	569.2	18.8	2.3	140.3	48.5	187.8		38.6	7.9	100.6	12.1			161.5
1985[6]	794	451		14	2.6	161	47	201		45	11	108	13			156

[1] Preliminary. [2] 5.5 bbls. = 1 s. ton. [3] Includes ethane & ethylene at plants & refineries. [4] 1 bbl. = 280 lbs. [5] And misc. products. [6] Estimate. *Source: Bureau of Mines*

T.493

Stocks of Crude Petroleum[1] in the United States at Beginning of Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	347.7	352.5	350.2	363.9	365.2	354.7	363.5	368.2	357.8	368.3	378.2	381.4
1979	376.3	375.2	380.5	399.2	402.9	403.2	414.4	403.0	412.2	415.1	436.0	438.6
1980	430.3	448.7	457.2	458.6	471.0	474.6	472.7	469.9	478.4	469.2	475.1	475.4
1981	482.9	486.4	494.2	513.8	531.7	543.8	547.8	559.0	546.7	555.2	578.0	588.5
1982	593.8	606.2	613.0	609.2	610.4	609.5	608.3	612.8	626.5	618.6	635.6	647.5
1983[2]	643.6	661.5	672.2	670.4	683.6	681.4	686.3	675.8	700.5	707.7	716.2	712.7
1984[2]	722.9	732.9	727.5	727.5	744.5	763.6	766.4	772.1	764.4	756.4	781.2	786.1

[1] Total gasoline-bearing in the U.S. [2] Preliminary. *Source: Bureau of Mines*

T.501

U.S. Production of Residual Fuel Oil and Distillate Fuel Oils In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	153.0	133.0	147.8	135.2	152.0	140.4	146.0	152.7	144.7	150.8	150.9	158.5	1,765
1979	153.6	131.1	146.9	137.6	144.2	141.0	151.3	152.1	149.4	151.3	149.3	158.6	1,766
1980	148.3	131.6	128.4	121.6	123.5	126.6	129.3	121.1	125.4	127.2	128.5	141.0	1,552
1981	142.6	122.4	121.1	112.1	114.0	112.0	110.6	120.5	117.1	115.4	118.3	129.8	1,436
1982	118.6	101.1	105.7	105.7	116.2	114.1	116.7	107.6	110.0	117.6	115.5	112.9	1,342
1983[1]	100.7	83.8	87.5	93.3	104.6	101.3	104.5	103.1	107.0	108.1	105.8	106.0	1,207
1984[1]	109.6	112.2	104.4	95.6	107.3	111.6	109.4	108.0	107.5	111.7	112.7		

[1] Preliminary. *Source: Bureau of Mines*

T.505

Exports[2] of Petroleum and Products from the United States In Thousands of Barrels[1]

		Refined Products											
					Fuel Oil		Lubricants						
Year	Crude	Total Refined	Finished Gasoline	Kerosene (Incl. Range Oil)	Distillate	Residual	Grease	Oil	Wax	Coke	Asphalt	Liquified Gases	Misc. Oils
1976	2,941	78,658	1,297	40	421	4,210	261	9,234	625	37,778	267	8,993	1,112
1977	18,255	70,333	725	23	519	2,305	256	9,388	734	37,393	223	6,483	1,339
1978	57,728	74,329	470	40	1,202	4,634	288	9,399	543	40,438	138	7,238	171
1979	85,707	86,149	155	25	1,079	3,266	279	8,275	836	53,270	181	5,414	163
1980	104,908	94,289	494	32	1,238	12,232	246	8,322	736	49,872	247	7,826	210
1981	83,200	133,900	700		1,900	43,200	7,000						
1982	86,300	211,200											
1983[3]	59,900	209,900											
1984[4]	650,000	192,000											

[1] 42 gallons per barrel. [2] Includes shipments from Noncontiguous Territories. [3] Preliminary. [4] Estimate. *Source: Bureau of Mines* T.494

Imports[2] of Petroleum & Products into the United States In Thousands of Barrels (42 Gallons Per Barrel)

		Refined Products												
				Fuel Oil										
Year	Crude	Total Refined	Asphalt	Distillate	Residual	Finished Gasoline	Jet Fuel	Kerosene	Liquified Pet. Gases	Lubricants	Petrochemical Feedstocks	Special Naphthas	Unfinished Oils	Wax
1976	1,935,012	705,256	3,905	53,520	517,325	47,774	27,983	3,163	47,436	1,361	1,370	45	11,735	654
1977	2,397,468	767,925	1,483	90,504	492,581	78,434	27,117	6,869	58,927	3,270	4,954	972	11,239	—
1978	2,329,700	722,900	907	63,288	494,640	69,518	31,346	4,031	40,889	2,978	2,994	1,750	9,913	—
1979	2,400,900	685,600	1,448	70,489	420,144	66,006	28,566	3,298	62,576	3,441	3,934	3,480	21,372	0
1980	1,946,200	582,500	1,414	51,900	343,600	51,071	29,521	3,690	56,711	2,667	10,245	3,354	19,659	0
1981	1,654,200	534,200		63,100	292,100									
1982	1,352,400	514,000		34,000	283,100									
1983[1]	1,317,800	525,900		63,500	255,200									
1984[3]	1,370,000	613,000		103,000	246,000									

[1] Preliminary. [2] Includes shipments to Noncontiguous Territories. [3] Estimate. *Source: Bureau of Mines* T.495

Average Price of Crude Petroleum at Wells[1] Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	263.3	242.3	242.5	245.0	246.0	248.1	254.3	254.3	254.3	264.4	264.4	264.4	253.6
1977	262.9	274.2	270.0	271.0	271.0	271.8	270.8	273.3	276.1	278.6	282.9	288.1	274.2
1978	288.8	289.7	293.4	294.3	295.5	298.9	301.9	302.7	305.7	307.5	310.5	312.4	300.1
1979	316.4	322.3	324.2	326.2	335.7	356.4	370.6	385.7	422.1	436.7	450.4	470.8	376.5
1980	513.6	515.1	522.8	533.9	540.1	549.0	551.4	566.8	571.3	579.6	600.6	632.8	556.4
1981	704.4	842.7	842.8	842.5	839.9	815.9	798.9	796.8	796.8	788.2	785.9	787.2	803.5
1982	787.2	770.3	744.8	717.9	717.8	718.2	718.4	718.4	718.3	735.3	733.6	720.0	733.4
1983	719.7	692.9	678.0	678.0	678.0	679.9	675.7	675.1	675.7	675.7	675.6	674.4	681.4
1984	675.6	675.6	675.6	673.9	673.9	673.3	672.6	671.1	670.6	670.8	658.5	652.6	670.3
1985	631.1												

[1] Buyers posted prices. *Source: Bureau of Labor Statistics* (0561) T.497

Average Wholesale Prices of Gasoline[1] (Regular Grade—Leaded) Index (Feb. 1973 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	187.0	189.1	191.1	193.3	199.0	206.8	215.5	228.9	233.7	235.1	233.0	229.5	211.8
1976	227.3	226.4	221.7	219.1	220.6	229.2	239.4	243.2	245.0	244.7	243.8	242.2	233.6
1977	239.9	240.4	245.6	249.5	254.5	258.9	261.2	260.5	259.6	257.5	256.3	255.8	253.6
1978	255.1	252.8	252.0	253.0	255.5	260.5	266.4	271.3	275.1	278.1	277.5	282.7	265.0
1979	287.0	292.3	299.9	313.0	331.6	349.3	371.0	397.7	422.1	439.2	488.3	459.6	367.6
1980	481.1	517.5	560.4	585.4	595.5	598.6	601.1	602.9	599.6	591.5	590.8	596.1	576.7
1981	607.5	632.9	683.2	694.7	690.4	685.6	677.4	668.4	666.4	666.1	661.7	657.7	666.0
1982	651.7	642.3	621.1	578.6	555.7	582.7	628.8	636.3	628.4	617.2	608.7	598.5	612.5
1983	576.7	551.4	533.5	515.3	537.2	559.5	566.6	571.2	566.3	559.2	548.2	535.8	551.7
1984	518.3	512.4	517.9	520.5	532.6	531.0	520.9	504.6	500.3	510.7	512.5	503.3	515.4
1985	481.7												

[1] Excludes aviation. *Source: Bureau of Labor Statistics* (0571–02) T.498

High, Low & Closing Prices of December Crude Oil Futures in New York In Dollars Per Barrel

Year of Delivery		Year Prior to Delivery Oct.	Nov.	Dec.	Delivery Year Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Life of Delivery Range
1983	High		Futures Trading				28.90	30.82	30.58	31.25	31.85	32.21	31.54	30.78	30.55	32.21
	Low		Began Mar. 30, 1983				28.60	28.85	29.30	29.80	30.68	31.47	30.15	29.55	29.92	28.60
	Close						28.60	30.60	29.80	30.90	31.82	31.53	30.33	30.37	28.70	—
1984	High	—	29.75	29.55	29.60	30.50	30.56	30.42	31.60	30.89	30.34	30.29	30.02	29.92	28.87	31.60
	Low	—	28.60	27.50	28.20	28.85	30.05	30.15	30.10	29.62	28.01	28.31	29.23	26.93	28.30	26.93
	Close	—	29.00	28.20	29.15	30.03	30.35	30.15	30.85	30.25	28.19	29.72	29.89	28.46	28.44	—
1985	High	29.50	27.93	27.20	25.95	26.50	27.60									
	Low	26.99	26.56	25.91	23.90	25.00	25.90									
	Close	27.66	26.72	25.91	25.35	25.45	27.42									

Source: N.Y. Mercantile Exchange

T.502a

Month End Open Interest of Crude Oil Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983			1,481	3,158	4,436	5,128	5,140	6,742	10,314	11,786	19,351	21,554
1984	23,168	27,650	28,142	26,647	23,970	28,635	37,349	32,245	32,236	37,613	39,896	49,201
1985	63,458	57,479	44,532									

Source: N.Y. Mercantile Exchange

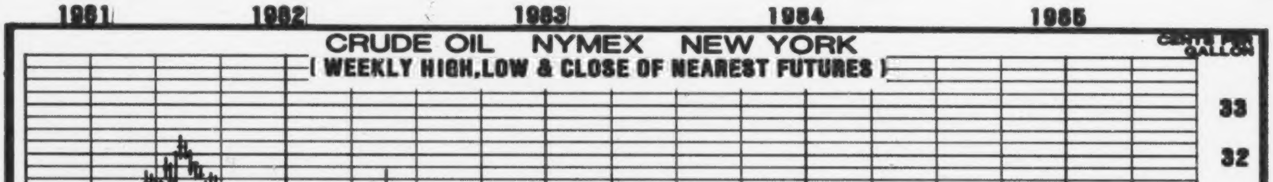
T.502b

Volume of Trading of Crude Oil Futures in New York In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1983			3.4	13.9	16.5	15.9	18.6	17.3	26.5	46.1	67.2	97.7	323.2
1984	108.7	130.7	121.5	106.2	136.4	134.5	154.9	200.4	111.2	243.3	174.7	217.7	1,840.3
1985	385.3	263.3	298.6										

Source: N.Y. Mercantile Exchange

T.502c



Plastics

Production and sales of plastic resins were estimated to have achieved record levels in 1984. Total 1984 production was expected to amount to 45.75 billion pounds, 7 percent above the 1983 level as of the third quarter of the year. Sales and captive use were expected to total 44.3 billion pounds, 4.9 percent over 1983.

Petroleum and natural gas are the basic raw materials of the plastics-synthetic resin industry. Naphtha, itself derived from crude oil, is the source of benzene, which, in turn, is converted into nylon, polycarbonate, silicones, polyesters, polystyrene (PS), and phenolics resins. Natural gas is an important feedstock source of ethylene and propylene which are essential in the production of both low and high density polyethylene (LDPE/HDPE), polyvinyl chloride (PVC), polypropylene (PP), and acrylics. Liquified refinery gases obtained from crude oil also are sources of ethylene, propylene, and butalene.

A strong recovery in the U.S. plastic materials industry began in 1983 and continued into 1984. This recovery was attributed to the strong demand generated by the housing, appliances, packaging, and automotive markets. Demand for plastics in the housing market was due to the demand for plastics like polyvinyl chloride for use in siding, pipes, and flooring. Plastics reportedly accounted for around 7 percent of the nonstructural parts in cars, measured on a weighted basis.

The constant-dollar value of U.S. industry shipments of plastic materials in 1984 was about 6.5 percent over the 1983 level, and total production of plastics materials was nearly 10 percent higher. Some capacity utilization rates were near maximum levels during 1984. The greater demand for plastics experienced during 1984 allowed producers prices that could cover higher feedstock costs. Price indices for plastic materials and resins increased by 2.5 percent during 1984.

The 1984 marketing year saw a continued increase in the number of foreign plastics producers aggressively entering the "commodity" plastics field and building up high-volume production capacity. In particular, producers in the Middle East, Canada, and Mexico held favorable positions in respect to the cost of feedstocks. U.S. producers faced strong competition from producers in these parts of the world, partly due to the negative effect of the strong dollar on U.S. export markets. The volume of U.S. exports of plastic materials reportedly declined by about 16 percent in 1984, to 4.0 billion pounds from 48 billion in 1983. At the same time, however, the value of U.S. export shipments of plastics increased by only about 1 percent in 1984. The export unit value, which is an indication of the price of plastics, increased by more than 20 percent in 1984, and this may have contributed to the decline in export volume. A weakening of some overseas economies adversely affected U.S. plastics exports as well, and the Latin American countries, that had been good customers for U.S. plastics in past years, tended to curtail their purchases because of accumulated international debts. Altogether, the ratio of U.S. exports of shipments declined from 12 percent in 1983 to 11 percent in 1984.

On the other hand, U.S. imports of plastic materials continued in the accelerating uptrend that has prevailed since 1977. A decline in 1982 was offset in 1983 by a 74 percent increase in the dollar value of imports. U.S. imports in 1984 represented a 48 percent increase over the year-earlier level. In the past two years, import prices, as measured by unit values, have declined between 18 and 20 percent, an occurrence that has helped U.S. plastics imports. The imports to new supply ratio increased from 2 percent in 1983 to nearly 3 percent in 1984.

During 1984, engineering resins were the category of plastics materials that showed the largest growth. These specialty polymers tended to be produced most heavily because of their relatively higher return on investment. All major markets for nylon in non-textile applications were reported as increasing during 1984, and automotive and truck usage of nylon expanded 18 percent over 1983 levels, the largest category of non-textile nylon usage. The market for epoxies achieved double-digit increases during the year due to increases for bonding and adhesive resins, fiber-reinforced laminates and composites, and protective coatings. The reinforced plastics/composites sector, which makes great use of unsaturated polyester, was expected to register a 16 to 18 percent increase in marketings over the 1983 level.

World Production of Plastics and Resins[3] (Condensation, Polymerization, Etc.) In Thous. of Metric Tons

					Germany										
Year	Australia	Austria	Czechoslovakia	France	East	West	Italy	Japan	Netherlands	Poland	Belgium	Hungary	USSR	United Kingdom	United States
1976	407	404	580	1,769	679	7,088	2,266	4,952	1,723	559	824	186	3,216	2,556	13,261
1977	480	430	738	1,834	734	6,270	2,538	4,978	1,783	583	1,471	144	3,300	2,710	11,232
1978	522	434	810	1,885	762	6,703	2,466	5,882	1,962	596	1,682	209	3,516	2,621	12,380
1979	618	437	853	2,220	779	7,255	2,562	6,964	2,012	571	1,969	289	3,504	2,647	13,866
1980	709	487	894	2,052	859	6,710	2,464	6,422	1,975	667	1,835	324	3,636	2,260	12,418
1981	700	504	913	2,480	998	6,600	2,154	5,936	2,393	588	1,940	307	3,696	2,051	
1982	715	454	961		989	6,275	2,142	5,986	2,502	600	2,023	322	4,057	1,966	
1983[1]		550	1,004		1,045	7,032	2,436	6,504	2,777	526	2,246	337	4,392	1,800	
1984[2]		575	1,100		1,150	7,500	2,600	6,800	2,750	600	2,400	350	4,500	1,900	

[1] Preliminary. [2] Estimate. [3] Refers to production of thermoplastic & thermosetting resins & plastic materials obtained by chemical transformation of natural organic substances or by chemical synthesis. *Source: United Nations* T.506

PLASTICS

Production of Important Synthetic Plastics & Resin Materials in the U.S. In Millions of Pounds

Year	Phenolic Resins	Polyethlene & Copolymers	Polypropylene	Polystyrene & Copolymers	Polyvinyl Chloride & Copolymers	Year	Phenolic Resins	Polyethlene & Copolymers	Polypropylene	Polyatyrene & Copolymers	Polyvinyl Chloride & Copolymers
1975	1,275	7,483	1,903	3,877	3,695	1980	1,745	11,720	3,699	5,540	5,485
1976	1,305	8,775	2,551	4,743	4,545	1981	1,688	12,604	4,008	5,915	5,618
1977	1,797	10,100	2,706	5,203	5,267	1982	1,398	12,548	3,515	5,609	5,397
1978	1,926	11,359	3,055	5,989	5,878	1983	1,460	14,053	4,457	6,254	6,256
1979	1,779	12,408	3,824	6,327	6,211	1984[1]	1,500	14,800	5,100	6,100	6,700

Note: Data included in the table does not cover all Plastics production. Various types of Plastics production of lesser importance are not included because statistics are not available on a consistent basis. Also, many individual firms do not make their production figures known. [1] Preliminary. *Sources: U.S. Tariff Commission, Bureau of Census* T.507

Average Wholesale Price Index of Plastic Materials in the United States—1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Plastic Resins and Materials (066)													
1979	204.2	206.3	210.9	220.6	228.5	230.1	244.5	250.1	252.0	260.0	261.4	262.5	235.9
1980	270.4	272.1	274.5	287.6	288.4	287.6	285.7	281.5	276.5	276.1	276.2	274.1	279.2
1981	274.7	276.1	279.4	285.1	287.9	290.0	295.9	297.5	296.8	299.5	293.2	294.2	289.2
1982	286.1	297.3	285.5	286.0	283.2	282.1	280.9	282.2	281.6	281.6	281.4	281.4	284.1
1983	283.8	283.1	282.1	285.4	288.0	289.1	291.3	293.7	302.6	299.1	297.9	301.5	291.5
1984	305.2	305.0	306.2	307.8	310.6	311.1	310.6	310.3	311.3	308.9	308.8	307.2	308.6
1985													
PE Resin, Low, Pkg. Firm (0662-0301.99)													
1978	196.1	196.1	197.0	198.0	198.6	198.0	194.4	190.3	189.3	187.2	184.1	184.1	192.8
1979	186.6	186.9	186.9	203.3	210.1	213.2	225.2	225.0	225.8	243.2	247.0	249.0	216.9
1980	257.2	260.9	N.A.	275.1	270.8	264.0	259.4	254.4	249.4	249.3	251.8	250.9	258.5
1981	251.5	251.2	252.5	263.0	263.0	263.7	280.7	N.A.	279.8	279.9	N.A.	247.3	263.3
1982	207.5	208.1	209.7	224.5	202.1	197.2	184.3	185.3	184.2	183.9	184.7	184.7	196.4
1983	204.9	205.2	193.9	215.4	215.4	N.A.	236.2	236.2	237.8	251.6	250.9	250.9	227.1
1984	272.1	272.6	272.1	272.1	272.1	272.1	272.1	272.1	272.1	272.1	272.1	272.1	272.1
1985													
Thermoplastic Resins (0662) — Dec. 1980 = 100													
1981	100.2	101.0	102.6	104.6	105.8	106.6	109.3	110.1	109.7	110.5	107.2	107.6	106.3
1982	103.5	104.2	103.2	103.5	102.1	101.5	100.9	101.5	101.3	101.3	101.3	101.1	102.1
1983	102.4	102.1	101.5	103.4	104.7	105.2	106.3	107.3	111.6	109.6	108.8	110.6	106.1
1984	112.3	112.0	112.5	112.8	113.4	114.0	113.8	113.6	114.2	113.0	112.9	112.1	113.1
1985													
Polystyrene Resin, Rubber Modified (0662-0602.99)													
1976	165.7	174.4	173.2	175.4	176.1	174.9	175.4	174.4	165.7	162.8	162.3	162.5	170.3
1977	162.5	162.1	161.6	157.1	157.2	158.8	161.9	161.7	162.8	163.2	164.4	164.6	161.5
1978	164.6	164.6	164.6	168.3	170.2	N.A.	171.6	171.6	172.7	171.7	171.7	172.1	169.4
1979	180.8	N.A.	N.A.	200.8	213.7	N.A.	220.9	236.7	272.9	272.6	273.3	274.9	238.5
1980	283.5	N.A.	278.8	291.4	291.9	293.2	288.0	287.6	282.1	286.0	287.3	289.4	287.2
1981	290.2	294.2	291.7	299.2	299.2	305.2	303.1	N.A.	N.A.	292.6	298.9	299.7	297.4
1982	297.8	297.8	297.8	N.A.	294.2	293.9	291.2	291.2	291.2	N.A.	291.0	290.9	293.7
1983	299.6	287.8	287.8	287.8	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	290.8
1984	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	302.5	301.6	301.3	300.6	299.7	298.2	300.7
1985													
Thermosetting Resins (0663)—Dec. 1980 = 100													
1981	101.4	101.1	101.4	104.0	104.5	105.4	106.6	106.5	106.6	107.7	107.6	108.2	105.1
1982	108.0	107.9	108.1	108.1	108.0	108.6	108.7	108.8	108.9	108.8	108.9	109.2	108.4
1983	109.0	108.8	108.9	108.5	108.4	108.6	108.7	109.4	110.1	110.8	111.5	111.5	109.5
1984	112.2	112.7	113.1	113.3	116.1	114.6	114.4	114.6	114.5	114.4	114.3	114.2	114.0
1985													
Phenolic Molding Compound (0663-0201.99)													
1978	202.0	194.6	195.1	195.1	195.1	195.1	195.1	195.1	192.8	184.9	185.5	185.5	193.0
1979	185.5	185.5	200.3	221.6	230.2	230.2	234.9	233.9	236.0	239.7	242.5	239.7	223.3
1980	239.7	239.7	244.3	249.9	251.3	251.3	250.4	240.2	240.2	240.2	240.2	240.2	244.0
1981	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	254.2	254.2	254.2	254.2	254.2	254.2	254.2
1982	254.2	254.2	254.2	254.2	254.6	254.6	254.6	254.5	254.5	254.5	254.5	254.5	254.4
1983	249.6	245.7	245.7	245.7	245.7	245.7	245.7	245.9	246.0	246.0	245.6	245.7	246.1
1984	245.6	245.8	246.3	252.1	259.5	260.2	259.4	259.4	259.4	259.4	260.5	259.2	255.6

Source: Bureau of Labor Statistics T.508

Platinum-Group Metals

The platinum group consists of six related metals which often occur together and are among the scarcest of the metallic elements. These metals are: platinum and palladium (the most important, by far), rhodium, ruthenium, iridium, and osmium.

World production of platinum-group metals in 1984 was about 3 percent above 1983 output, according to a preliminary estimate of the U.S. Bureau of Mines. The Republic of South Africa remained the leading producer of platinum, and the USSR remained the leading producer of palladium. Together, these two countries accounted for close to 96 percent of estimated world production of platinum-group metals in 1984. However, South African production was estimated to have increased while Soviet production was estimated to have been unchanged in 1984.

U.S. primary production of platinum-group metals is insignificant, being derived as a byproduct of copper refining. Secondary non-toll refined production of platinum in 1984 dropped to 61,353 troy ounces from 119,458 ounces in 1983, while non-toll refined production of palladium increased to 198,562 ounces from 165, 859 ounces a year earlier. Toll-refined output of platinum increased to 445,162 ounces in 1984 from 434,850 ounces in 1983, and toll-refined production of palladium increased to 492,376 ounces from 458,758 ounces in 1983.

The U.S. net import reliance on platinum-group metals in 1984 was estimated at 91 percent of apparent consumption versus a revised estimate of 90 percent for 1983. U.S. imports of platinum sponge increased nearly 52 percent in 1984, to about 1.53 million ounces, while palladium imports increased almost 47 percent, to 1.80 million ounces. The Republic of South Africa accounted for about 68 percent of U.S. platinum imports in 1984, followed by the U.K. with some 17 percent. The Republic of South Africa also accounted for the largest share of U.S. palladium imports, about 33 percent, compared with 22 percent for the USSR and 19 percent for the U.K.

It is estimated that the United States and Japan consume around two-thirds of the world's platinum-group metals, with Western Europe and the Soviet Union accounting for most of the remainder. In Japan, more than one-half of the platinum consumed is by the jewelry industry. Its use in automotive catalytic converters is the most important use in the U.S. Preliminary reports indicated that platinum-group metal sales to U.S. industry in 1984 increased by about 19 percent, with the greatest percentage increases registered in sales to the auto industry, up 53 percent. Sales to the petroleum industry increased 36 percent, and to the electrical industry 19 percent. Sales to the dental and medical industry were off 24 percent, and to other industries sales were off 7 percent. Platinum sales to the auto industry in 1984 amounted to an estimated 722,000 ounces, representing about 70 percent of total platinum sales, which increased by about 28 percent in 1984. Palladium sales to the auto industry amounted to an estimated 286,000 ounces, representing 26 percent of total sales, which increased 17 percent in 1984. The electrical industry accounted for the largest share of total palladium use (30 percent) in 1984. The automotive, chemical, and petroleum industries used platinum-group metals primarily as catalysts. The other industries used platinum-group metals in a number of ways for their chemical inertness and refractory properties. It is estimated that demand for platinum-group metals, from a 1983 base, will increase at an average annual rate of about 2.5 percent through 1990. U.S. apparent consumption in 1985 is estimated by the Bureau of Mines at 4.1 million ounces.

Total stocks of platinum-group metals held by refiners, importers, and dealers in the U.S. on December 31, 1984 totaled 1,324,389 troy ounces, up nearly 41 percent from the revised year-earlier total of 941,011 ounces. Platinum stocks increased 44 percent, to a reported 623,358 ounces, and palladium stocks rose 34 percent, to 553,834 ounces.

As of November 30, 1984, the National Defense Stockpile contained 440,000 ounces of platinum, unchanged from a year earlier, versus a stockpile goal of 1.31 million ounces. The palladium inventory held 1.256 million ounces versus a goal of 3.0 million. Iridium holdings were 30,000 ounces, up 5,000 from a year earlier and compared with the stockpile goal of 98,000 ounces. (The General Services Administration purchased 1,800 ounces of iridium and 7,000 ounces of palladium for the National Defense Stockpile in the fourth quarter of 1984.)

The monthly average U.S. dealer price for platinum was $357 per ounce versus $424 in 1983. The monthly average high was $399 in March and the low $303 in December 1984. The dealer price for palladium averaged $148 in 1984 versus $136 in 1983. The monthly average high was $161 in March and the low $134 in December.

Futures Market

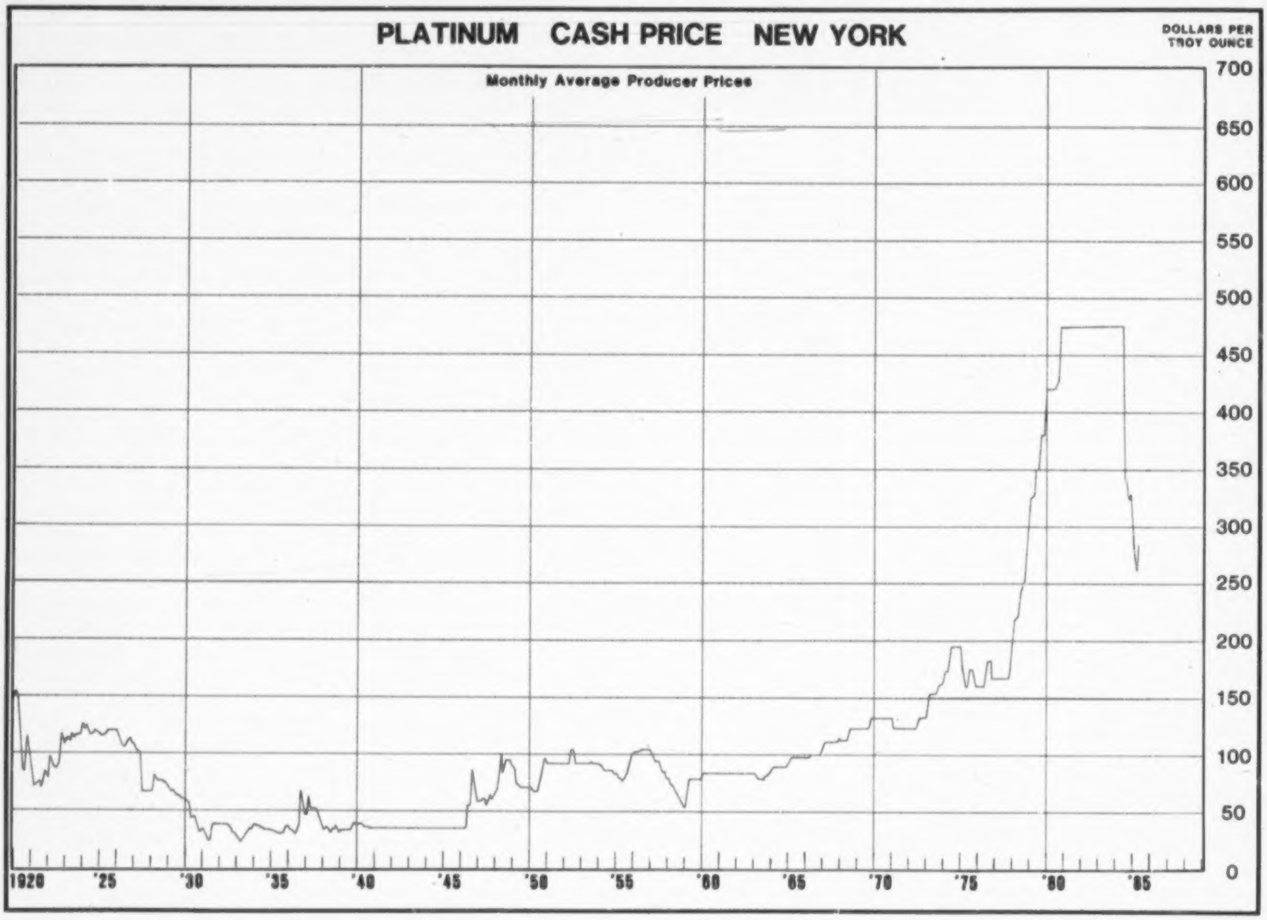
Both platinum and palladium futures are traded on the New York Mercantile Exchange (NYMEX).

World Mine Production of Platinum-Group Metals In Troy Ounces

Year	Australia	Zimbabwe	Finland	Canada	Colombia[3]	Ethiopia	Japan	South Africa	USSR	United States	Yugoslavia	World Total[1]
1979	9,645	—	1,643	197,943	12,933	108	34,637	3,017,000	3,200,000	7,300	5,916	6,487,125
1980	12,603	9,774	900	410,757	14,345	113	41,334	3,100,000	3,250,000	3,348	4,919	6,848,093
1981	14,989	7,500	3,601	382,658	14,801	125	36,269	3,110,000	3,350,000	7,318	3,601	6,930,862
1982	13,900	4,469	8,809	228,425	20,000	125	43,273	2,600,000	3,500,000	8,033	3,480	6,430,514
1983[2]	13,900	4,000	9,000	167,019	20,080	125	58,582	2,600,000	3,600,000	6,257	3,300	6,482,183
1984[1]				200,000				2,800,000	3,600,000	6,000		6,700,000

[1] Estimate. [2] Preliminary. [3] Placer platinum. *Source: Bureau of Mines*

T.509

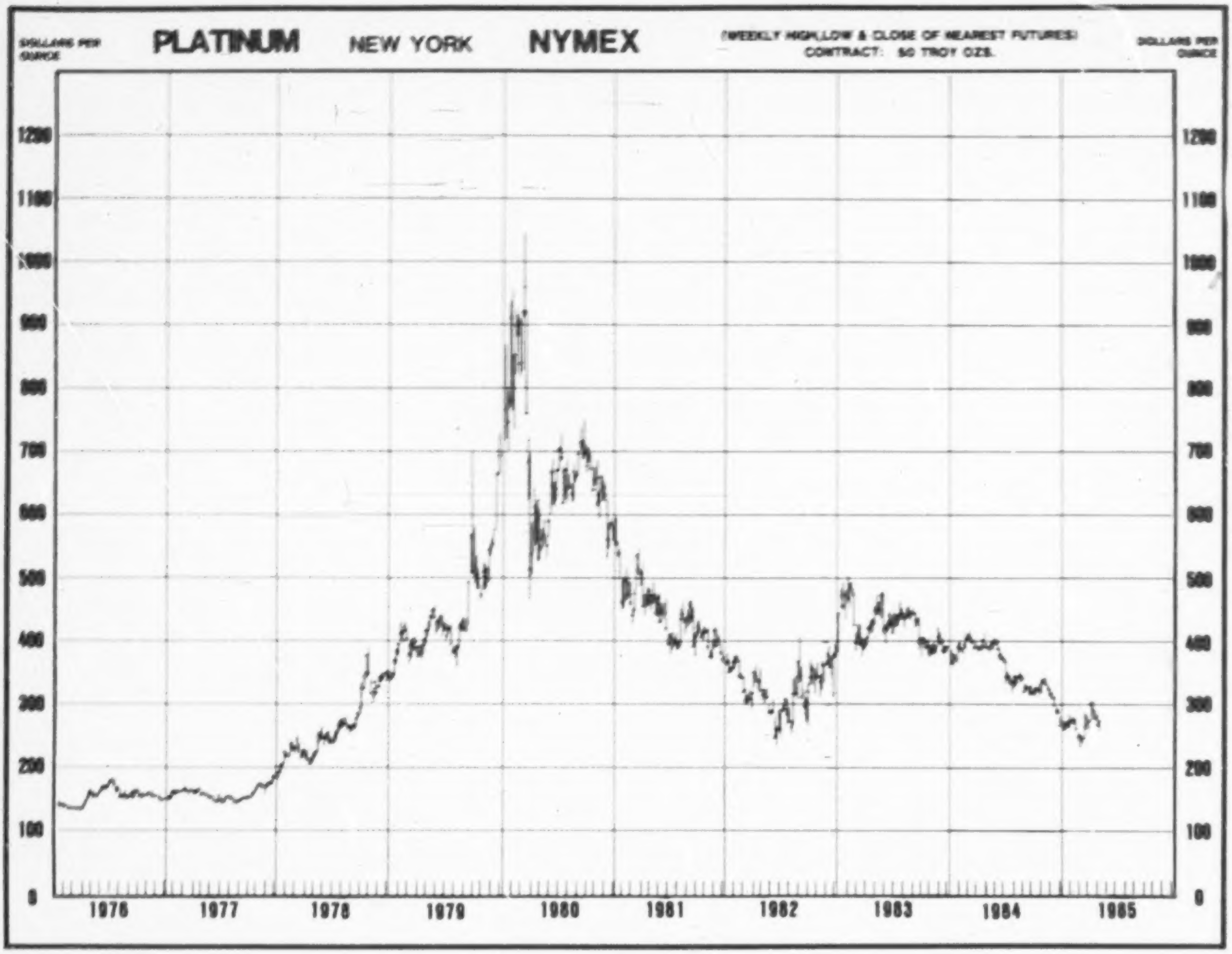


PLATINUM CASH PRICE NEW YORK

Platinum-Group Metals Sold to Consuming Industries in the United States In Thousands of Troy Ounces

Year	— Automotive — Platinum	Others[2]	— Chemical — Platinum	Others[2]	— Electrical — Platinum	Others[2]	Dental & — Medical — Platinum	Others[2]	Jewelry & — Decorative — Platinum	Others[2]	— Petroleum — Platinum	Others[2]	—All Platinum-Group Metals— Platinum	Palladium	Other[2] Metals	Total
1972			225.9	363.5	92.4	443.5	30.5	95.5	20.7	29.3	98.8	31.4	545.3	876.0	140.9	1,562.2
1973			239.0	334.1	117.4	551.1	27.9	136.3	22.4	38.9	123.6	20.3	658.5	1,012.5	160.9	1,833.9
1974	350.0	15.0	350.0	150.0	98.6	452.6	25.5	125.7	23.0	35.3	139.5	26.7	943.7	886.1	151.2	1,981.0
1975	273.0	97.0	148.8	166.9	73.6	153.1	17.1	115.9	22.9	29.5	108.0	5.4	698.6	541.5	68.6	1,308.7
1976	481.0	194.9	83.6	154.7	89.3	197.5	26.9	140.4	23.4	14.8	59.1	7.7	851.1	657.1	94.9	1,603.1
1977	354.3	125.9	84.4	196.6	90.2	254.5	27.1	113.9	34.7	22.1	74.8	13.6	789.8	700.5	102.0	1,592.3
1978	597.5	201.8	149.7	186.5	106.4	346.5	44.1	208.0	25.8	25.1	108.4	19.2	1,196.3	917.9	145.4	2,259.6
1979	803.2	248.3	98.6	264.9	115.8	457.4	27.1	244.9	27.7	21.6	170.0	27.9	1,408.9	1,132.6	214.5	2,756.0
1980	517.1	214.2	119.0	165.6	150.1	376.1	25.8	245.4	51.0	22.6	144.0	26.7	1,118.2	912.0	175.7	2,205.9
1981	446.7	160.6	78.1	152.4	111.7	388.3	18.7	255.8	27.6	19.6	88.3	22.9	872.6	889.2	158.8	1,920.7
1982	477.8	144.8	63.6	200.6	90.0	348.4	22.8	312.1	16.0	12.7	21.6	21.7	780.1	926.3	166.8	1,873.3
1983[1]	508.5	191.8	65.4	99.8	74.7	404.8	16.7	261.7	10.3	10.6	38.0	51.1	796.7	921.8	195.4	1,914.0
1984[3]													1,024.0	1,080.0	180.9	2,284.9

[1] Preliminary. [2] Palladium, iridium, osmium, rhodium, & ruthenium. [3] Estimate. *Source: Bureau of Mines* T.512



Average Producer Prices of Platinum in New York In Dollars Per Troy Ounce

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	122.50	122.50	122.50	122.50	122.50	122.50	128.00	132.50	132.50	132.50	132.50	132.50	127.13
1973	132.50	141.97	152.50	152.50	152.50	152.50	152.50	152.50	155.24	160.50	160.50	160.50	152.18
1974	162.68	172.50	172.50	172.50	174.55	195.00	195.00	195.00	195.00	195.00	195.00	195.00	184.98
1975	195.00	180.53	175.00	163.06	160.00	160.00	162.73	175.00	175.00	172.17	160.00	160.00	169.87
1976	160.00	160.00	160.00	160.00	160.00	163.54	175.60	182.50	182.50	182.50	167.00	167.00	168.39
1977	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.65	174.81	167.71
1978	186.55	206.58	217.07	220.00	220.00	227.73	237.89	241.74	250.23	253.18	284.00	300.00	237.08
1979	303.41	325.00	325.00	327.38	350.00	350.00	350.00	357.83	380.00	380.00	380.00	393.33	351.83
1980	420.00	420.00	420.00	420.00	420.00	420.00	420.00	425.24	475.00	475.00	475.00	475.00	436.77
1981	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00
1982	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00
1983	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00
1984	475.00	475.00	475.00	475.00	475.00	475.00	342.32	338.39	325.82	323.78	328.43	306.27	401.25
1985	274.24	269.14											

Source: American Metal Market

T.511

PLATINUM-GROUP METALS

Salient Statistics of Platinum and Allied Metals in the U.S. In Troy Ounces

Year	Net Import Reliance as a % of Apparent Consump.	Production Crude[5]	Refinery		Stocks as of Dec. 31[1]				Imports for Consumption	Value of Imports Mil. $	Exports		
			New Metal	Secondary Metal	Platinum	Palladium	Other	Total			Platinum	Other Groups[3]	Other[6]
1979	89	7,300	8,392	309,022	305,605	323,865	131,812	761,282	3,479,128	840.5	207,832	522,195	189,218
1980	87	3,348	2,300	330,923	502,185	353,002	118,074	973,261	3,501,782	1,177	289,454	302,457	173,053
1981	83	7,318	5,607	391,637	401,389	398,933	117,856	918,178	2,849,617	800.3	391,194	258,745	213,426
1982	81	8,033	7,078	344,160	604,632	384,184	117,812	1,106,628	2,493,706	553.9	175,805	262,764	423,576
1983[2]	90	6,257	5,884	287,149	431,417	412,074	97,520	941,011	3,218,022	752.8	184,599	261,188	782,967
1984[4]	91	6,000	6,000	370,000	623,358	553,834	147,197	1,324,389	4,474,106	1,118.1	220,885	375,802	565,543

[1] In hands of refiners, importers, & dealers. [2] Preliminary. [3] Palladium, rhodium, iridium, osmium, ruthenium & osmium metals & alloys. [4] Estimate. [5] From crude platinum placers & byproduct platinum-group metals. [6] Ore & concentrates, waste, scrap & sweepings. *Source: Bureau of Mines*

T.513

High, Low & Closing Prices of April Platinum Futures in New York In Dollars per Ounce

Year of Delivery		Year Prior to Delivery											Delivery Year				Life of Delivery Range
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
1980	High	438.0	421.5	409.5	458.3	446.0	429.0	434.0	573.6	608.6	550.0	715.3	974.4	960.0	1,045.0	642.0	1,045.0
	Low	388.5	370.0	369.0	402.0	410.0	382.0	368.0	417.0	468.5	467.0	537.0	715.0	827.0	465.0	525.0	270.1
	Close	423.2	390.1	409.5	451.0	426.9	388.8	428.0	573.6	485.5	546.0	692.6	832.0	920.1	560.0	602.0	—
1981	High	1,100.1	1,190.0	738.0	624.8	753.5	785.0	720.0	810.0	755.5	714.0	680.5	621.0	518.0	546.0	523.0	1,190.0
	Low	972.0	623.5	623.5	563.8	646.0	653.7	660.0	710.0	673.0	622.0	561.0	452.2	455.0	430.0	443.5	430.0
	Close	1,070.0	663.5	626.0	624.8	740.7	676.0	707.2	742.8	681.8	673.4	606.0	463.5	461.7	500.3	461.0	—
1982	High	595.0	624.7	594.5	551.0	533.0	460.6	488.5	494.0	462.5	434.5	434.0	392.5	380.0	346.5	364.0	624.7
	Low	535.7	507.0	507.0	502.0	447.0	425.5	418.7	407.0	424.0	381.0	376.0	352.5	342.0	296.5	311.5	296.5
	Close	540.2	577.1	529.9	528.0	455.5	438.7	460.7	435.4	429.8	405.0	384.1	368.2	344.3	318.3	332.2	—
1983	High	429.6	390.0	400.0	356.0	329.5	333.0	358.1	415.0	392.0	385.0	405.0	499.3	502.0	428.0	433.0	502.0
	Low	388.0	342.6	352.0	318.0	263.0	280.5	271.5	291.0	285.2	320.0	352.0	393.0	396.3	376.5	393.0	263.0
	Close	395.0	357.2	352.0	315.2	306.4	303.3	333.1	294.4	355.1	384.3	392.6	498.7	396.3	392.6	424.0	—
1984	High	526.0	461.0	459.5	495.0	465.0	474.0	470.0	464.5	421.0	426.0	422.0	398.5	410.0	417.5	407.2	528.0
	Low	423.3	410.0	433.5	458.0	422.0	439.0	439.5	404.0	382.0	380.0	389.5	369.0	382.0	388.0	384.0	364.3
	Close	423.3	425.6	453.4	468.5	441.5	457.7	453.6	415.8	383.0	417.2	399.5	391.3	403.8	392.2	397.0	—
1985	High	438.5	447.5	440.0	427.5	433.5	402.0	370.5	352.2	345.0	350.0	328.0	289.5	282.0			
	Low	415.0	422.0	414.0	411.5	401.0	343.0	350.5	335.0	327.8	322.0	291.0	265.5	244.5			
	Close	433.5	426.0	417.4	426.2	402.9	349.7	361.3	336.1	331.7	323.0	293.0	280.5	249.3			

Source: N.Y. Mercantile Exchange

T.514

Month–End Open Interest of Platinum Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	8,755	9,866	9,302	9,088	8,861	9,683	10,856	9,850	8,563	7,525	7,595	8,926
1980	8,200	8,409	6,209	5,434	6,369	7,943	7,797	8,286	14,239	12,140	12,026	11,911
1981	9,410	8,946	9,441	7,709	8,130	7,891	5,520	6,446	8,421	7,055	8,601	7,839
1982	6,278	7,524	8,686	8,302	10,326	9,337	11,137	12,853	14,141	13,002	15,547	15,620
1983	19,927	23,506	15,197	15,878	18,375	15,918	16,934	15,671	15,413	12,450	13,227	13,384
1984	12,692	13,912	13,805	15,244	15,852	17,254	15,775	15,766	17,288	14,826	14,753	15,525
1985	15,210	14,131										

Source: N.Y. Mercantile Exchange

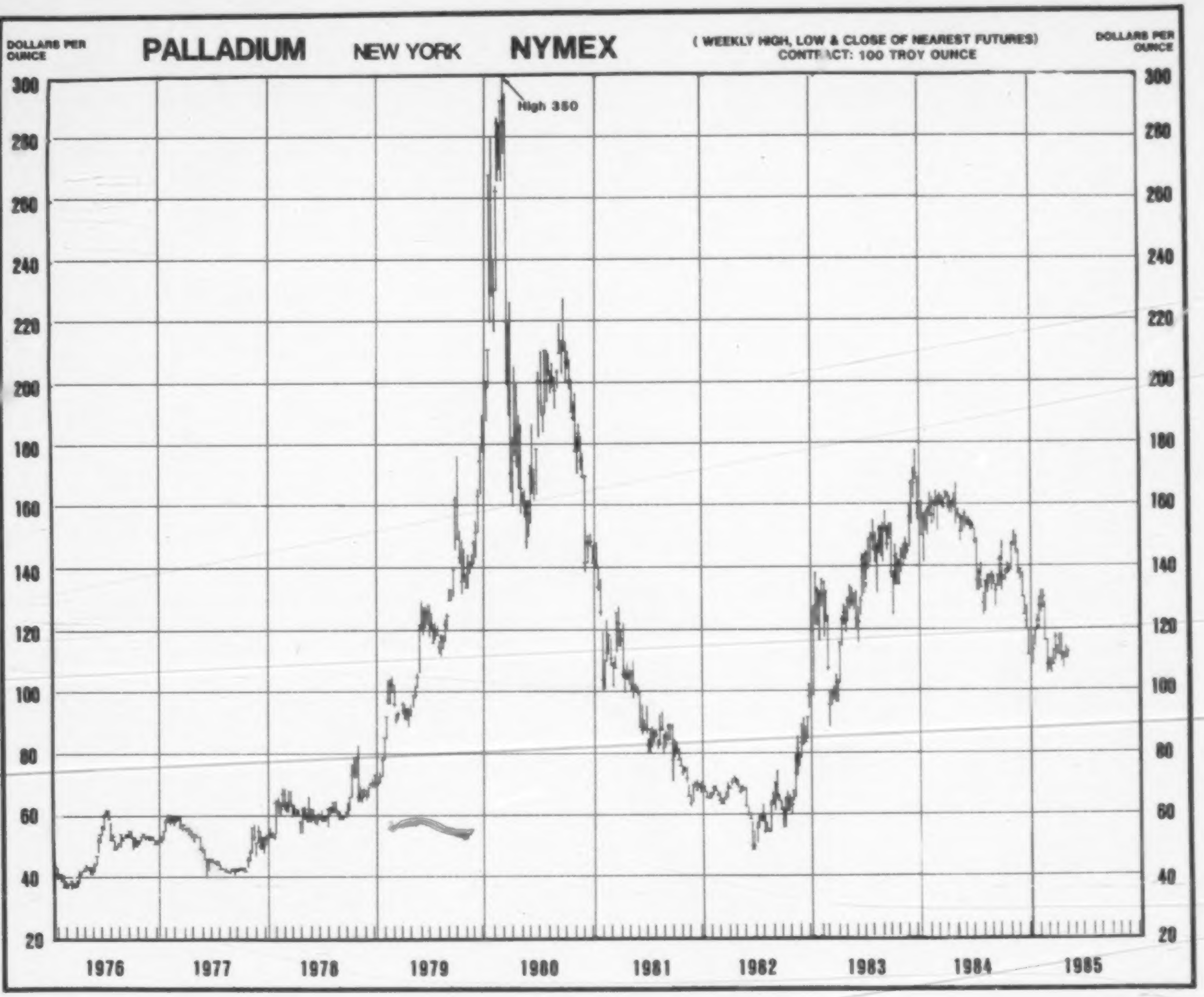
T.515

Volume of Trading of Platinum Futures in New York In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	43.8	45.4	43.4	42.1	45.2	50.8	47.6	56.0	48.4	35.0	38.2	40.1	536.1
1980	35.2	28.5	41.7	21.4	26.6	37.6	40.8	26.7	59.7	41.0	34.8	35.9	429.7
1981	36.5	29.7	56.1	36.7	30.8	44.7	37.9	39.1	63.9	35.4	33.2	46.6	490.5
1982	32.5	29.5	48.4	42.4	33.1	46.6	55.8	76.9	84.8	70.8	70.0	78.1	669.0
1983	126.0	117.0	107.9	71.9	106.2	115.4	75.9	77.0	79.2	61.5	57.2	57.9	1,035.4
1984	44.7	43.7	68.9	54.5	44.9	53.8	55.2	38.4	52.2	35.9	38.3	40.7	571.1
1985	41.0	26.2											

Source: N.Y. Mercantile Exchange

T.516



Average Dealer[1] Price of Palladium in the United States In Dollars Per Troy Ounce

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	124.32	105.00	93.92	90.50	73.27	57.71	55.86	58.30	50.52	47.60	44.00	44.00	70.42
1976	42.00	39.62	37.56	38.50	41.58	48.50	55.75	50.28	53.25	52.99	59.20	52.38	47.63
1977	54.06	58.10	57.82	55.20	52.97	45.18	44.90	42.36	42.20	43.07	48.83	51.97	49.72
1978	55.10	64.86	64.18	59.33	60.82	60.42	59.53	61.86	60.09	71.58	70.74	73.25	63.48
1979	76.14	103.35	95.56	93.97	105.53	124.33	121.40	117.45	136.94	143.63	141.95	163.42	118.62
1980	220.00	262.80	259.83	194.79	169.74	169.56	199.55	203.88	212.74	204.72	185.85	155.69	203.10
1981	134.38	112.18	117.82	110.42	102.90	94.76	83.61	85.86	85.50	79.08	72.13	69.51	95.68
1982	67.70	67.53	66.99	69.43	68.51	59.27	57.35	57.76	64.50	59.99	74.03	86.14	66.60
1983	116.05	124.33	99.55	114.67	130.60	128.66	143.83	147.65	152.21	145.35	147.71	160.69	134.28
1984[2]	157	160	161	160	155	153	138	137	138	138	146	134	148

[1] Based on wholesale quantities, prompt delivery. [2] Estimate. *Source: American Metal Market* T.510

Pork Bellies

Pork bellies, the layer of meat and fat from the underside of the hog, are cured and smoked to produce bacon. An average hog will yield two bellies, each weighing from about 8 to 18 pounds depending on the size of the animal when slaughtered. The bellies account for approximately 12 percent of a hog's live weight and a somewhat larger percentage of the total cut-out value. Profit margins for the hog producer reflect the total value of all pork products, including hams and loins as well as bacon, and even when the overall cut-out value is profitable, the price of any one of these cuts may be independently weak.

Generally, futures prices for pork bellies advanced during 1984, partly influenced by high costs of production for hog producers and prospects for a cutback in hog production. However, belly prices dipped sharply in the third quarter of the year with a peak in storage stocks of frozen pork bellies. Beginning 1984 cold storage stocks amounted to 78.6 million pounds, nearly twice a year earlier. By mid-1984, stocks of frozen bellies had increased sharply to a peak level of 127.5 million pounds. From that point, stocks declined abruptly to 24.0 million pounds by the year's end, a drawdown that helped propel futures prices to their highs for the year. In December 1984, cold storage stocks of bellies finally fell below 1983 levels.

Bacon slicing for all four quarters of 1984 totaled 1.72 billion pounds, nearly two-thirds of which was accounted for by retail slicings, and which compared with 1.61 billion pounds sliced in 1983.

Commercial hog slaughter in the fourth quarter of 1984 was estimated at 22.4 million head, down 8 percent from a year earlier. The fall hog slaughter was expected to draw most heavily from the inventory of market hogs weighing 60–179 pounds on September 1, which was down by 8 percent. Projected and observed slaughter rates relative to this September 1 inventory suggested that producers were not expanding breeding herds. Therefore, commercial pork production in the fourth quarter of 1984 was expected to total 3.88 billion pounds, or 8 percent under a year earlier. Commercial pork production for all of 1984 was estimated at 14.6 billion pounds, down 3 percent from a year earlier.

Commercial slaughter of hogs in the first quarter of 1985 was projected at 3 to 5 percent under a year earlier, or about 21 million head. Lower feed costs were expected to encourage producers to feed hogs to heavier weights. As a result, average dressed weights were estimated as rising 1 to 3 pounds over 171 pounds in 1984. First quarter commercial pork production could total 3.63 billion pounds, 3 percent under the comparable 1984 level. Commercial production of pork in the second quarter of 1985 was forecast at 3.60 billion pounds, down 2 percent from a year earlier. Commercial pork production in the second half of 1985 was forecast at 7.35 billion, 2 percent over a year earlier. For all of 1985, commercial pork production was expected to total 14.6 billion pounds, nearly equal to the 1984 level.

Futures Market

Pork belly futures are traded on the Chicago Mercantile Exchange.

United States Quarterly Sliced Bacon Production[1] In Millions of Pounds

Year	Retail	Commercial	Total	Year	Retail	Commercial	Total
1982	1,000.7	500.8	1,501.5	1984[2]	1,038.0	693.6	1,731.6
I	246.3	120.9	367.2	I	253.6	176.4	430.0
II	247.2	128.0	375.3	II	246.8	162.2	409.0
III	273.5	129.2	402.6	III	268.8	166.4	435.2
IV	233.7	122.7	356.4	IV	268.8	188.6	457.4
1983	1,113.6	562.8	1,676.4	1985			
I	248.6	127.7	376.2	I			
II	250.8	140.8	391.6	II			
III	260.6	152.1	412.8	III			
IV	353.6	142.2	495.7	IV			

[1] Smoked, dried or cooked. Under Federal Inspection. [2] Preliminary. *Source: Agricultural Marketing Service, USDA* T.517a

U.S. Frozen Pork Belly Storage Stocks (In Thousand Pounds, as of First of the Month)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1976	44,722	37,386	38,526	51,176	60,144	63,799	49,258	25,773	8,689	5,858	9,708	24,946
1977	42,906	38,338	36,364	52,806	69,539	80,658	62,695	29,901	9,640	5,241	4,230	20,642
1978	23,747	19,013	15,738	39,631	70,976	82,343	75,027	44,787	21,015	7,482	20,013	40,964
1979	54,367	39,432	37,172	57,744	69,689	86,065	78,935	53,373	21,800	11,077	17,739	42,156
1980	70,201	69,635	67,800	85,444	98,163	106,869	96,967	68,616	34,410	21,867	42,186	72,127
1981	97,365	90,181	94,661	104,357	125,469	132,568	117,795	72,998	36,094	16,228	18,060	35,058
1982	54,639	46,167	41,855	66,061	—	—	72,593	—	—	7,558	—	—
1983	31,292	33,592	33,400	44,304	54,510	64,671	63,468	48,409	26,642	15,672	20,047	52,924
1984	78,648	71,568	78,169	95,009	112,205	127,527	115,034	85,630	43,626	22,321	24,048	38,333
1985[1]	57,361	53,623	51,730									

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.517

Wkly Fed. Inspected Hog Slaughter

1984[2] Week Ending	(In Thousand Head) 1984	1983	1982	1981
Jan. 7	1,350	1,204	1,428	1,297
14	1,418	1,457	1,881	1,957
21	1,708	1,564	1,656	1,885
28	1,625	1,561	1,643	1,793
Feb. 4	1,577	1,519	1,623	1,816
11	1,543	1,350	1,552	1,773
18	1,571	1,467	1,650	1,731
25	1,578	1,491	1,484	1,672
Mar. 3	1,579	1,544	1,652	1,698
10	1,656	1,646	1,698	1,757
17	1,791	1,584	1,676	1,823
24	1,691	1,546	1,663	1,826
31	1,681	1,558	1,705	1,840
Apr. 7	1,695	1,607	1,609	1,848
14	1,695	1,738	1,606	1,914
21	1,728	1,704	1,608	1,823
28	1,642	2,694	1,656	1,727
May 5	1,588	1,659	1,640	1,771
12	1,635	1,642	1,596	1,763
19	1,664	1,607	1,610	1,771
26	1,579	1,558	1,553	1,694
June 2	1,578	1,390	1,532	1,422
9	1,367	1,617	1,279	1,561
16	1,591	1,528	1,561	1,618
23	1,541	1,510	1,467	1,500
30	1,431	1,557	1,416	1,434
July 7	1,438	1,348	1,394	1,324
14	1,105	1,538	1,162	1,401
21	1,445	1,493	1,434	1,444
28	1,378	1,535	1,352	1,442
Aug. 4	1,305	1,476	1,357	1,496
11	1,382	1,540	1,398	1,539
18	1,406	1,535	1,391	1,554
25	1,409	1,473	1,424	1,576
Sept. 1	1,479	1,613	1,400	1,591
8	1,502	1,435	1,411	1,658
15	1,396	1,772	1,286	1,456
22	1,657	1,716	1,527	1,785
29	1,679	1,732	1,418	1,699
Oct. 6	1,679	1,841	1,501	1,742
13	1,699	1,844	1,482	1,769
20	1,701	1,895	1,536	1,817
27	1,754	1,844	1,599	1,786
Nov. 3	1,736	1,927	1,614	1,814
10	1,754	1,955	1,620	1,789
17	1,742	1,981	1,677	1,841
24	1,681	1,593	1,650	1,511
Dec. 1	1,446	1,944	1,310	1,947
8	1,812	1,941	1,676	1,884
15	1,792	1,804	1,523	1,884
22	1,692	1,465	1,588	1,864
29	1,687	1,350	1,278	1,223
1985[2]				
Jan. 5	1,238			
12	1,295			
19	1,679			
26	1,615			
Feb. 2	1,528			
9	1,565			

Weekly Pork Belly Storage Movement

1984[2] Week Ending	Stocks[1] in Thousands of Pounds In	Out	On Hand	Net Movement
Jan. 7	1,189	1,232	70,926	−13
14	677	2,016	69,587	−1,339
21	83	3,077	66,593	−2,994
28	202	3,219	3,219	63,576
Feb. 4	235	1,537	62,274	−1,302
11	996	691	62,579	+305
18	2,027	469	64,137	+1,558
25	1,842	101	65,878	+1,741
Mar. 3	3,458	135	69,201	+3,323
10	3,409	71	72,539	+3,338
17	4,745	127	77,157	+4,618
24	3,020	112	80,065	+2,908
31	3,488	315	83,238	+3,173
Apr. 7	2,862	530	85,570	+2,332
14	4,072	165	89,477	+3,907
21	5,436	139	94,774	+5,297
28	3,940	361	98,353	+3,579
May 5	3,410	265	101,498	+3,145
12	4,424	146	105,776	+4,278
19	3,673	114	109,335	+3,559
26	2,760	318	111,777	+2,442
June 2	1,559	289	113,047	+1,270
9	1,111	907	113,251	+204
16	1,162	1,346	113,067	−184
23	394	2,999	110,462	−2,605
30	214	5,746	104,930	−5,535
July 7	519	4,230	101,219	−3,711
14	320	5,624	95,915	−5,304
21	121	6,479	89,557	−6,358
28	338	8,292	81,603	−7,954
Aug. 4	220	9,580	72,243	−9,360
11	135	10,728	61,650	−10,593
18	101	8,728	53,023	−8,627
25	155	6,987	46,191	−6,832
Sept. 1	63	5,353	40,901	−5,290
8	11	5,757	35,155	−5,746
15	157	4,424	30,888	−4,267
22	212	5,151	25,949	−4,939
29	255	5,298	20,906	−5,043
Oct. 6	74	3,335	17,645	−3,261
13	583	944	17,284	−361
20	1,148	911	17,521	+237
27	1,790	1,054	18,257	+737
Nov. 3	2,144	994	19,407	+1,150
10	3,083	1,528	20,962	+1555
17	4,172	1,058	24,076	+3,114
24	3,880	716	27,240	+3,164
Dec. 1	3,993	363	30,870	+3,630
8	5,589	567	35,892	+5022
15	6,171	377	41,686	+5,794
22	5,446	408	46,724	+5,038
29	1,826	206	49,147	+1,620
1985[2]				
Jan. 5	2,407	1,008	50,546	+1,399
12	2,398	1,885	51,059	+513
19	1,561	2,242	50,378	−681
26	1,074	2,164	49,288	−1,090
Feb. 2	706	2,499	47,495	−1,793
9	377	2,302	45,570	−1,925

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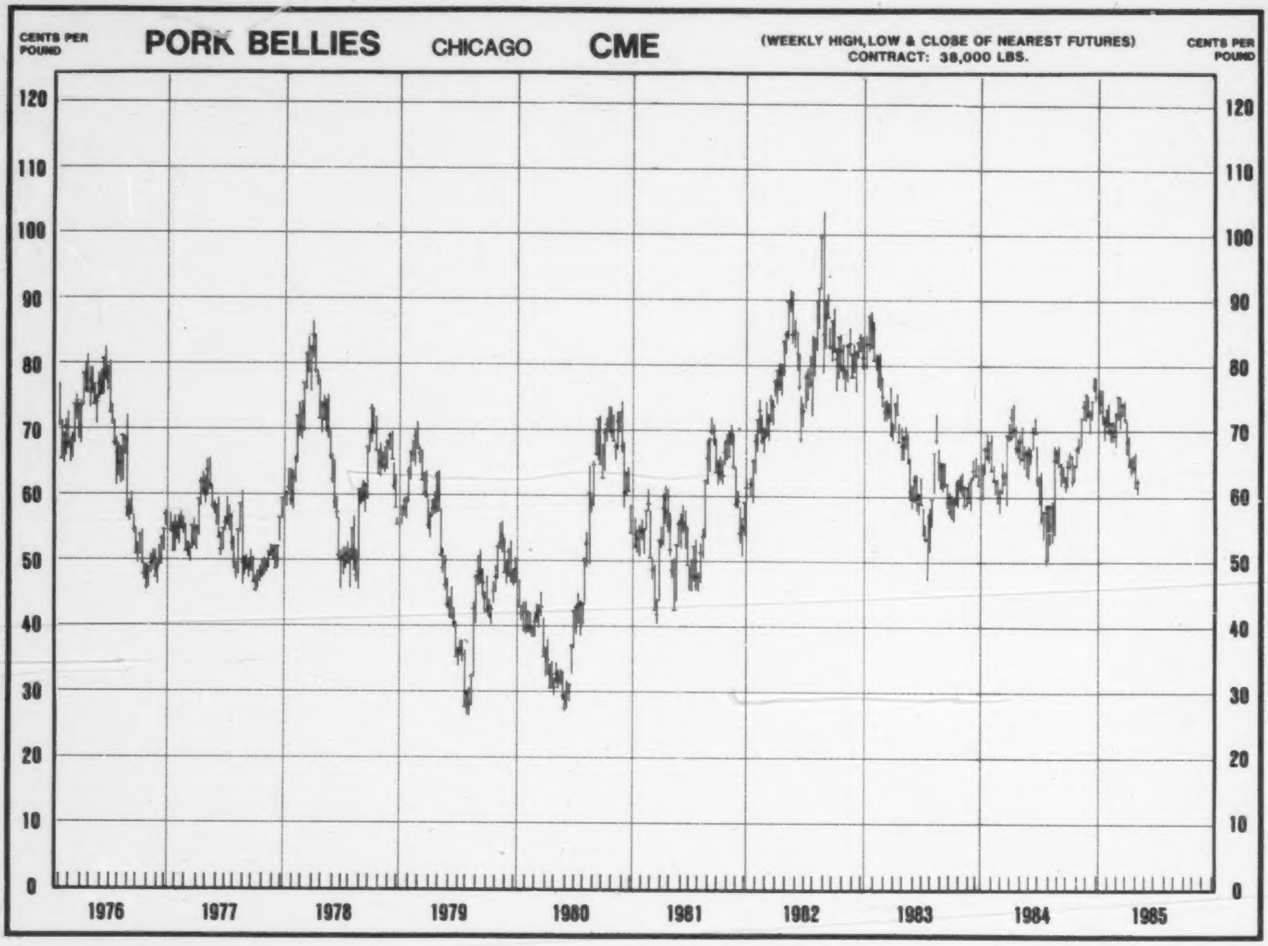
[1] Total approved Chi. Merc. Exch. warehouses. [2] Preliminary. *Sources: U.S. Department of Agriculture; Chicago Mercantile Exchange* T.518



Month End Open Interest of Pork Bellies Futures at Chicago   In Contracts

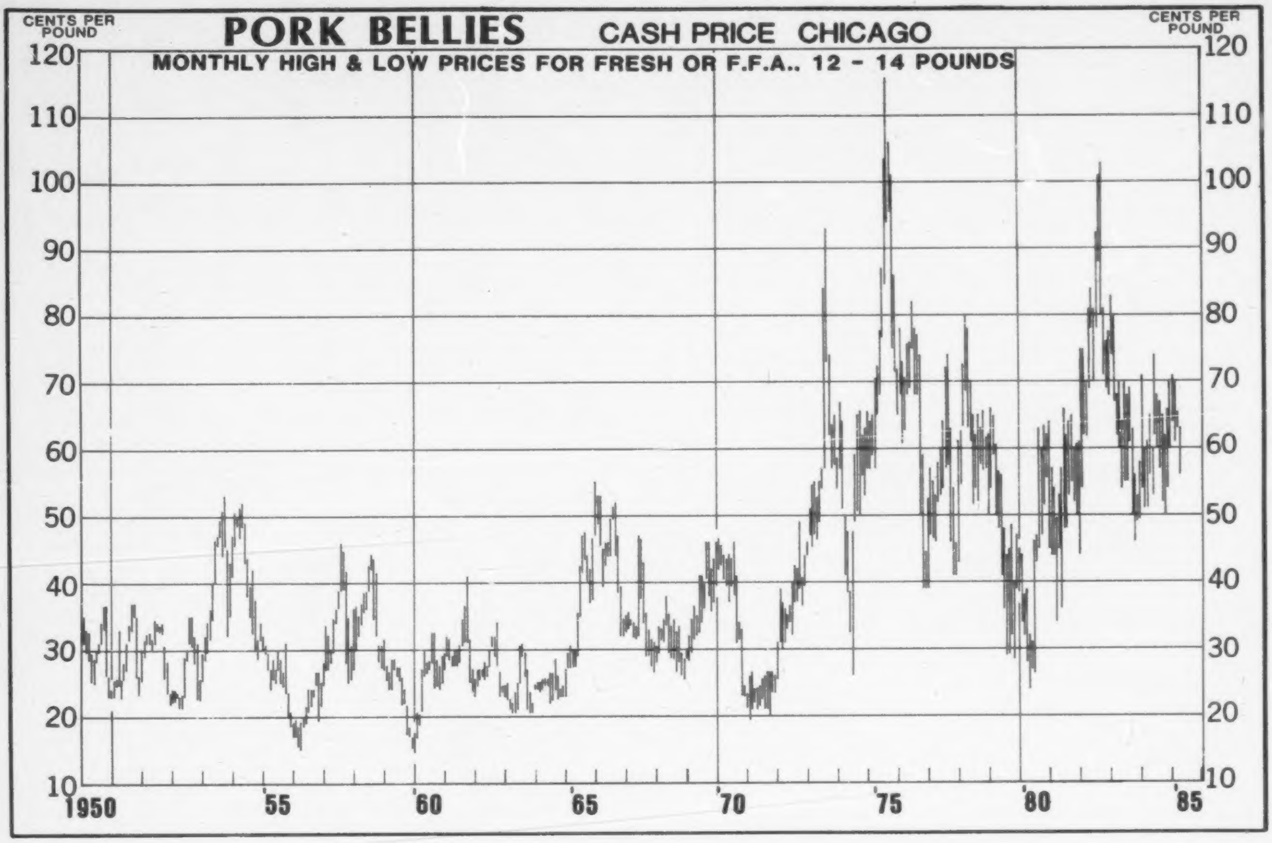
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	10,597	10,592	9,337	10,586	14,069	23,174	25,400	22,840	22,062	21,805	25,585	27,981
1980	29,631	28,195	18,212	22,939	28,404	26,944	20,025	14,983	18,242	23,098	26,231	22,480
1981	15,687	12,471	12,821	16,714	15.825	18,911	11,550	10,058	10,424	14,088	16,425	13,643
1982	21,542	21,666	21,048	28,063	25,765	17,940	14,203	14,799	16,090	19,063	18,596	18,521
1983	19,654	16,510	17,563	16,850	16,870	17,242	12,162	12,268	16,042	16,976	20,242	20,247
1984	18,836	17,434	19,114	18,332	17,379	17,250	9,453	7,387	8,925	9,763	13,265	13,507
1985	14,452	14,784	12,561									

Source: Chicago Mercantile Exchange T.520

Volume of Trading of Pork Bellies Futures at Chicago   In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	114,980	99,552	106,840	99,408	117,262	154,721	162,816	151,865	118,087	120,649	139,703	121,509	1,514,176
1980	191,920	206,539	189,881	183,876	165,844	206,669	198,256	169,404	167,355	220,435	178,821	176,622	2,250,945
1981	176,243	154,438	135,527	179,503	157,342	199,013	187,785	131,619	139,272	171,480	194,561	170,944	1,997,697
1982	196,040	216,333	263,431	265,863	301,763	248,825	217,434	229,207	188,129	224,449	227,482	232,688	2,811,674
1983	276,556	229,198	207,543	225,034	226,617	227,522	218,813	169,113	132,894	154,642	159,982	175,363	2,403,277
1984	221,795	182,080	186,817	159,774	207,820	173,066	187,619	119,469	77,028	121,926	148,940	121,711	1,908,045
1985	173,488	137,334	133,509										

Source: Chicago Mercantile Exchange T.521



High, Low & Closing Prices of May Pork Bellies Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1979	High	72.50	69.30	68.75	65.20	60.00	62.70	68.00	72.02	68.40	68.70	63.70	70.95	67.30	63.60	63.50	72.50
	Low	63.10	65.00	62.25	50.30	51.65	54.70	56.10	62.80	62.60	55.00	55.80	62.50	54.60	50.85	47.95	47.95
	Close	69.50	65.00	64.25	53.50	60.00	57.47	67.70	65.27	66.70	56.27	63.45	65.25	55.35	63.27	49.35	—
1980	High	—	56.10	55.60	51.05	49.20	49.30	52.42	50.25	57.85	54.60	53.47	44.85	46.70	38.00	34.30	57.85
	Low	—	50.25	47.90	43.10	39.35	39.10	43.40	41.65	47.60	47.92	41.55	39.65	34.77	29.45	30.40	29.45
	Close	—	56.10	47.90	43.65	41.00	48.60	45.60	48.70	50.27	49.50	43.05	42.50	36.30	30.27	31.60	—
1981	High	58.50	52.60	49.75	54.50	61.60	66.25	73.30	75.15	75.15	77.05	59.60	63.00	55.30	61.35	52.65	77.05
	Low	49.75	46.15	43.35	41.32	53.50	57.40	59.25	63.47	67.70	58.05	53.65	52.55	41.90	52.15	42.45	41.32
	Close	51.10	48.40	43.45	53.90	59.30	59.50	68.47	71.20	75.15	58.05	57.70	52.55	55.05	52.15	48.77	—
1982	High	69.15	75.50	72.70	75.90	69.40	72.10	72.50	70.22	71.40	63.75	73.55	75.80	77.85	85.10	91.50	91.50
	Low	54.50	70.15	63.00	64.10	61.75	64.12	62.70	62.95	59.25	51.90	61.12	67.55	69.00	74.75	84.15	51.90
	Close	69.15	70.15	72.70	64.10	65.15	64.95	65.15	68.85	61.05	62.70	73.55	70.37	75.15	84.92	84.95	—
1983	High	73.85	77.95	79.20	77.00	75.00	82.90	85.45	82.05	83.10	83.30	86.30	81.55	76.40	75.90	70.90	86.30
	Low	70.20	71.65	74.00	65.25	67.25	69.02	75.37	75.80	74.25	74.35	78.15	74.25	68.50	65.60	64.45	64.45
	Close	72.60	77.55	79.00	72.72	74.35	82.10	82.40	77.80	80.75	79.70	79.70	74.25	70.60	67.80	65.05	—
1984	High	65.40	65.95	65.90	61.90	64.75	71.55	66.80	64.40	65.60	67.40	71.30	68.10	71.07	74.10	70.65	74.10
	Low	61.25	62.80	60.00	56.00	54.70	61.50	59.50	58.35	60.32	60.40	62.12	59.25	60.55	65.50	64.35	54.70
	Close	64.90	64.72	61.00	57.15	61.90	65.37	59.37	64.22	62.30	63.62	67.27	60.70	69.22	65.82	65.42	—
1985	High	79.95	80.50	79.00	82.47	77.70	69.50	67.70	68.52	76.50	79.00	79.15	74.90	75.40			
	Low	67.00	74.95	73.80	75.40	63.70	63.15	61.05	62.50	67.90	70.75	70.75	67.47	70.20			
	Close	78.50	75.30	74.65	77.75	64.75	66.80	62.62	68.15	76.40	78.52	72.75	70.72	71.82			
1986	High	75.60															
	Low	69.00															
	Close	75.35															

Source: Chicago Mercantile Exchange

T.519

Potatoes

The USDA estimated U.S. fall potato planting in 1984 as 5 percent higher than in 1983. However, total production in 1984 was up 8 percent from 1983. Fall production in the seven eastern states increased only minimally, but production in the central states increased by 13.8 percent. Michigan alone increased its production 27 percent compared with the 1983 level. The fall potato production in the western states increased moderately with summer 1984 production increasing 23 percent over 1983. Total spring production was 23,798 cwt., an increase of 39 percent, with California increasing its production 33 percent.

Fall potato stocks in the 15 major producing states totaled 174 million cwt. on January 1, 1985. This represented an increase of 5 percent from 1984, but only a 3 percent decrease from the 1983 level. The total amount of potatoes in storage on January 1, 1985 was estimated as being 1 percent below 1984. Maine, New York, and Pennslyvania stored 21.9 million cwt., which was slightly below 1984 storage and 21 percent below 1983. Maine stocks were down by 6 percent, New York maintained its 1984 stocks level, and Pennsylvania increased its storage by 41 percent. Stock of potatoes in the central states totaled 41 million cwt. as of January 1, 1985. This was a 14 percent increase over 1984 with Minnesota showing the largest increase at 35 percent, followed by Michigan with 20 percent. The western states increased their storage 2 percent from 1984, but it was 4 percent under the 1983 level.

Disappearance of potatoes in the major producing states through January 1, 1985 totaled 130 million cwt., an increase of 9 percent over the previous two years. This disappearance included a shrinkage and loss of 18.9 million cwt., an increase of 3 million cwt. from the 1983 harvest to January 1984. In December 1984, cold storage holdings of potatoes increased 21 percent over a year earlier, and 3 percent over 1982. Stocks of frozen french fries in cold storage rose from 634 million cwt. to 713 million cwt., a 12 percent gain. Holdings of other frozen potatoes increased 25 percent in 1984.

Futures Market

Round White potato futures are traded on the New York Mercantile Exchange.

World Production of Potatoes In Thousands of Metric Tons

Yr. of Harvest	Austria	Canada	Czechoslovakia	France	E. Germany	W. Germany	Italy	Japan	Netherlands	Poland	Spain	United Kingdom	USSR	United States	World Total
1979	1,494	2,760	3,725	5,900	12,243	8,716	2,957	3,381	5,937	49,600	5,400	6,485	90,956	15,536	255,134
1980	1,264	2,478	2,713	6,864	9,214	6,694	2,396	3,421	6,267	26,391	5,742	7,080	67,023	13,737	202,263
1981[1]	1,176	2,541	3,500	5,294	10,000	7,586	2,204	3,250	6,445	43,074	5,483	6,282	72,000	15,358	225,320
1982[2]		2,602						3,650		35,000			83,000	16,108	
1983[2]														15,146	
1984[2]														16,404	

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.523

Salient Statistics of Potatoes in the United States

Year	Acreage		Yield Per Harv. Acre Cwt.	Total Production Mil. Cwt.	Farm Disposition Used Where Grown			Farm Price $ Cwt.	Value of		Stocks on Jan. 1[4] 1,000 Cwt.	Foreign Trade[5]		Consumption[2] Per Capita —In Lbs.—	
	Planted — 1,000 Acres —	Harvested			Seed & Feed — Million Cwt. —	Shrinkage & Loss	Sold[3]		Prod.[6] — Million $ —	Sales		Dom. Exports — Ths. Tonnes —	Imports	Fresh	Processed
1980	1,182	1,148	265	303.9	6.4	23.4	273.1	6.55	1,979	1,788	176,020	444.3	194.9	56.1	61.9
1981	1,263	1,232	276	340.6	6.0	26.1	306.5	5.41	1,819	1,660	147,010	447.4	246.2	48.2	65.4
1982	1,303	1,267	280	355.1	7.3	31.0	316.8	4.45	1,563	1,411	164,380	339.7	180.7	50.0	65.6
1983[1]	1,272	1,243	269	333.9	6.0	24.7	303.3	5.82	1,936	1,765	178,980	364.0	157.1	54.1	67.1
1984[1]	1,337	1,300	278	361.6				5.67			165,330				
1985[1]											172,860				

Note: 60 pounds equals one bushel. [1] Preliminary. [2] Fresh & processed. [3] For all purposes, including food, seed processing livestock feed. [4] Merchantable stocks held by growers & local dealers. [5] Year beginning Oct. [6] Farm weight basis. Excludes canned & frozen potatoes. *Source: Economic Research Service, U.S.D.A.* T.522

Utilization of Potatoes in the United States In Millions of Cwt.

Crop Year	Sales												Used on Farms Where Grown	Total
		For Processing							Other Sales					
	Table Stock	Chips, Shoestrings	For dehydration	Frozen French Fries	Other Frozen Pdt's	Canned Potatoes	Other Canned Pdt's[2]	Starch & Flour	Livestock Feed	Seed	Total Sales			
1979	115.0	38.3	30.8	74.3	14.4	2.5	2.3	3.6	6.6	18.2	306.4		36.1	342.5
1980	96.8	37.9	28.2	67.2	13.7	2.1	2.0	2.2	3.9	19.2	273.1		29.8	302.9
1981	112.0	39.3	29.9	79.8	16.8	2.5	1.7	2.3	3.6	20.4	308.3		32.3	340.6
1982–3	120.3	40.7	27.7	76.1	17.3	2.7	1.8	4.6	6.2	19.5	316.8		38.3	355.2
1983–4[1]	109.0	43.3	26.8	73.5	19.1	2.2	1.7	3.0	3.8	20.8	303.3		30.6	333.9

[1] Preliminary. [2] Hash, stews, soups. [3] Includes 12.0 sold for livestock feed & starch under the U.S.D.A. diversion program. *Source: Crop Reporting Board, U.S.D.A.* T.531

Potato Crop Production Estimates, Stocks & Disappearance in the U.S. In Millions of Cwt.

Year	Crop Production Estimates						Total Storage Stocks[2]						Disappearance of Previous Fall Crop Until				
	Total Crop			Fall Crop				Following Year						Following Year			
	Oct. 1	Nov. 1	Dec.	Oct. 1	Nov. 1	Dec. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1
1979	347.9	348.3	347.6	300.3	300.7	301.6	200.8	176.0	147.9	121.7	92.6	59.5	87.5	114.0	143.0	170.0	200.0
1980	296.9	296.9	301.0	260.7	260.7	264.6	172.0	147.0	122.1	97.7	72.7	44.5	84.1	110.0	135.0	160.0	186.0
1981	329.9	329.9	333.7	287.1	287.1	290.7	193.6	164.4	137.8	111.8	82.3	50.8	93.6	121.0	149.0	175.0	204.0
1982	350.0	350.0	349.3	306.9	308.9	305.0	206.5	179.0	150.2	122.5	90.1	57.3	92.3	121.0	149.0	178.0	209.0
1983	329.8	329.8	325.7	292.7	292.7	325.7	192.5	165.3	138.9	112.7	81.7	50.4	90.7	117.0	143.0	169.0	200.1
1984[1]	358.8	358.8	361.6	310.0	310.0	312.2	201.3	172.9	143.0	116.7			101.0	129.0	160.0	186.0	

[1] Preliminary. [2] Held by growers & local dealers in the fall producing areas. *Source: Crop Reporting Board, U.S.D.A.* T.525

United States Potato Production by Seasonal Groups In Millions of Hundredweight (CWT.)

Year	Winter	Spring			Summer		Fall								
		Florida	Calif.	Total Spring	Va.	Total	Maine	Wisc.	Minn.	Colo.	No. Dak.	Wash.	Idaho	Oregon	Total Fall
1979	2.4	4.4	11.1	21.3	2.6	21.8	27.7	17.0	12.9	11.5	18.2	48.5	85.1	25.3	296.9
1980	2.4	3.6	8.8	17.1	1.5	17.0	25.0	16.0	9.9	11.0	15.7	43.9	79.8	19.7	266.4
1981	2.2	5.3	10.3	20.8	2.3	20.0	26.5	18.2	13.3	11.6	20.1	52.9	84.5	21.7	295.6
1982	2.3	5.7	9.6	21.0	2.5	22.8	27.0	22.6	11.5	12.8	17.3	52.8	91.8	21.1	309.1
1983	2.2	5.1	8.3	18.3	1.0	18.7	22.6	18.9	10.3	14.0	20.5	54.1	86.0	20.7	294.7
1984[1]	2.6	6.7	11.1	23.8	1.5	23.0	21.4	21.4	13.8	17.2	20.6	56.9	86.6	22.7	312.2
1985[1]	2.9	6.3	11.0	23.5											

[1] Preliminary, December estimate. *Source: U.S.D.A.—Crop Reporting Board* T.524

United States Potatoes Processed[1], Eight States In Thousands of cwt.

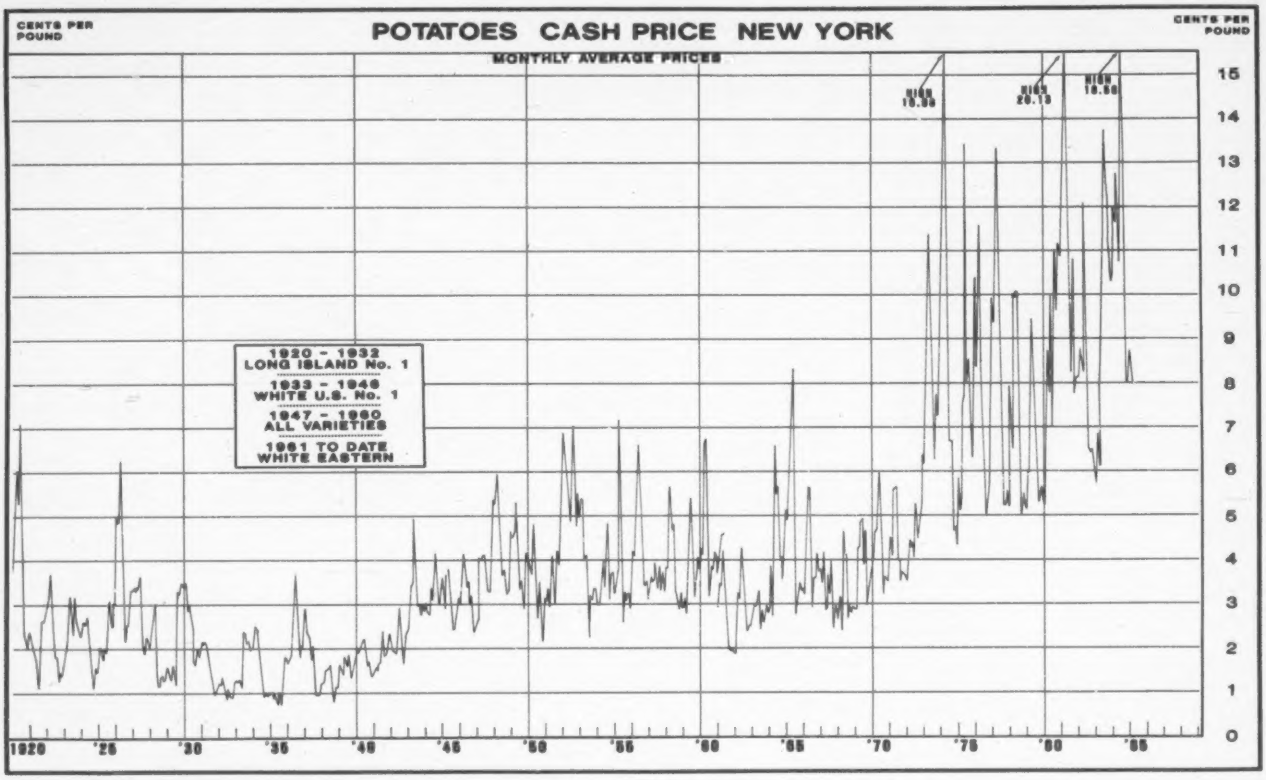
States	Storage Season	to Dec. 1	to Jan. 1	to Feb. 1	to Mar. 1	to Apr. 1	to May 1	Entire Season
Idaho and Malheur Co., Oreg.	1982-3	14,330	18,645	23,395	28,535	34,480	39,715	53,395
	1983-4	15,755	20,445	24,785	29,540	35,155	40,640	53,810
	1984-5	19,000	24,310	29,200	34,010			
	1985-6							
Maine[2]	1982-3	1,915	2,800	3,640	4,400	5,230	6,010	7,450
	1983-4	1,160	1,745	2,260	2,780	3,370	3,970	5,125
	1984-5	1,630	2,290	2,995	3,505			
	1985-6							
Wash. and other areas, Oreg.	1982-3	16,840	20,130	23,685	27,870	32,100	36,365	45,500
	1983-4	16,245	19,920	23,690	28,250	33,280	37,455	45,800
	1984-5	20,745	24,690	29,345	33,555			
	1985-6							
Other States[3]	1982-3	5,655	7,135	8,625	10,220	12,170	13,820	16,405
	1983-4	4,305	6,005	7,755	9,600	11,615	13,400	16,320
	1984-5	5,695	7,510	9,210	10,930			
	1985-6							
Total	1982-3	38,740	48,710	59,345	71,025	83,980	95,910	122,750
	1983-4	37,465	48,115	58,490	70,170	83,420	95,465	121,055
	1984-5	47,070	58,800	70,750	82,000			
	1985-6							

[1] Total quantity received and used for processing regardless of the state in which the potatoes were produced. Does not include quantities used for potato chips in Maine, Mich., Minn., N. Dak. or Wis. [2] Includes Maine grown potatoes only. [3] Mich., Minn., N. Dak. and Wis. *Source: Crop Reporting Board, U.S.D.A.* T.524a

U.S. Cold Storage Stocks of All Frozen Potatoes (First of Month) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	777.5	778.7	784.5	818.2	849.3	930.4	971.7	866.0	671.3	647.1	761.0	814.3
1980	812.2	835.1	868.2	906.6	908.2	958.7	964.0	814.3	598.5	626.5	754.3	813.2
1981	729.9	707.5	757.8	774.4	792.6	812.4	792.7	592.2	457.9	563.9	718.4	746.9
1982	688.7	703.5	783.4	846.0	—	—	939.3	—	—	626.8	—	—
1983[1]	767.3	800.1	879.9	899.8	958.0	986.6	1,015.3	823.2	603.8	637.2	775.2	817.4
1984[1]	773.0	754.8	783.9	827.6	808.2	843.3	840.4	626.8	516.5	635.3	821.3	884.2
1985[1]	892.3	900.0	939.1									

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.529



POTATOES CASH PRICE NEW YORK

MONTHLY AVERAGE PRICES

Wholesale Price of Potatoes (White Eastern)[2] at New York In Dollars Per Cwt.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1983	5.750	6.875	6.125	9.000	9.250	9.750	13.750	12.500	11.500	10.500	10.250	10.625	9.656
1984	12.000	11.625	12.750	11.500	10.750	13.750	18.500	13.500	9.500	8.000	8.000	8.750	11.552
1985	8.250												

[1] All varieties and types of Irish old and new stock. U.S. No. 1A, (0113–0443). *Source: Bureau of Labor Statistics* T.527

Month End Open Interest of Potato Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	3,494	2,809	689	605	666	639	638	547	422	186	79	46
1984[1]	1,449	1,498	1,191	665	947	1,459	1,745	2,098	2,213	2,092	1,863	1,870
1985	2,010	2,280	1,684									

[1] Cash potato contract starting Jan. 1984. *Source: N.Y. Mercantile Exchange* T.532

Volume of Trading in Maine Potato Futures, on N.Y. Mercantile Exchange In Contracts

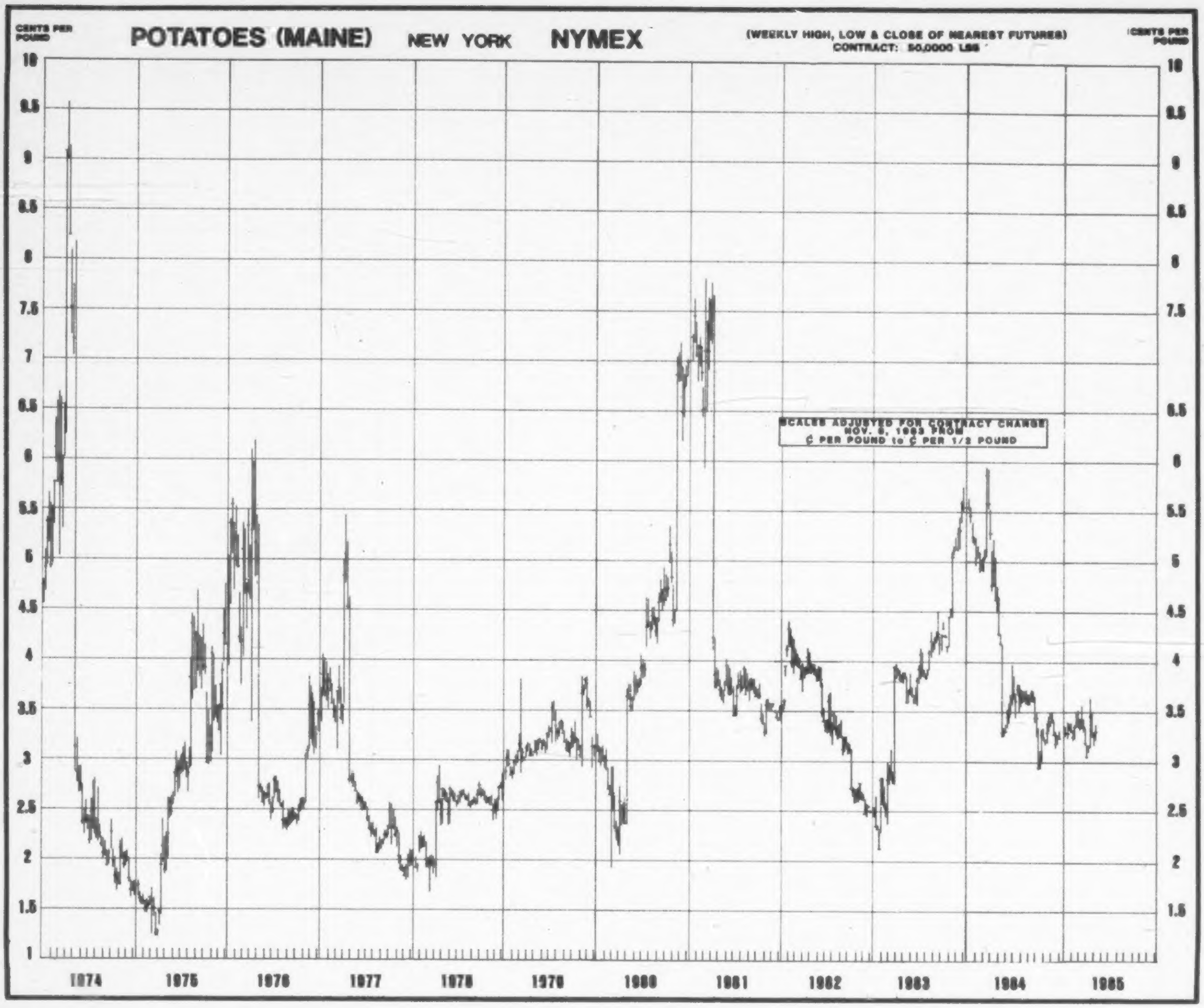
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1983	3,981	4,018	5,256	442	736	791	1,309[1]	2,966	4,365	3,757	1,958	2,009	33,765
1984	1,930	1,894	3,161	2,893	1,297	2,372	2,578	1,819	1,665	3,865	1,795	1,326	26,595
1985	1,311	1,777	2,505										

[1] Cash Potato Contract starting July 1983. *Source: New York Mercantile Exch.* T.526

U.S. Average Price Received by Farmers for Potatoes In Dollars Per Cwt.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.[1]
1983	3.53	3.69	4.07	4.65	5.52	5.33	6.36	7.03	4.94	4.14	4.87	5.46	5.82
1984[2]	6.43	6.29	6.55	6.69	7.04	7.52	9.81	8.77	4.69	4.28	4.45	4.91	5.67
1985[2]	5.22	5.18	5.39										

[1] Annual weighted average by sales. [2] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.* T.530



High, Low & Closing Prices of April Potato Futures at New York In Cents per Pound

Year of Delivery		Year Prior to Delivery											Delivery Year				Life of Delivery Range
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
1981	High	—	—	—	10.10	12.22	15.62	15.47	16.06	16.70	16.74	16.98	17.75	17.40	15.51	—	17.75
	Low	—	—	—	8.25	9.70	11.42	13.55	14.66	14.58	14.75	14.85	15.85	13.90	12.93	—	8.25
	Close	—	—	—	9.96	11.91	13.73	14.72	15.38	14.77	16.58	16.73	16.79	14.14	14.44	—	—
1982	High	—	11.87	11.49	10.25	10.22	10.86	10.99	10.80	10.50	8.77	8.77	8.99	9.39	8.25	—	11.87
	Low	—	11.05	9.70	9.40	8.85	8.93	10.02	9.96	8.14	8.17	7.72	7.75	8.22	7.40	—	7.40
	Close	—	11.14	9.85	10.21	9.04	10.50	10.20	10.11	8.37	8.48	7.85	8.64	8.27	7.80	—	—
1983	High	—	—	10.74	10.65	10.20	9.75	9.13	8.72	8.49	6.90	6.83	7.41	6.69	6.23	—	10.74
	Low	—	—	9.71	9.85	8.52	8.44	8.49	8.20	6.20	6.10	6.28	6.37	5.82	5.46	—	5.46
	Close	—	—	10.50	10.01	8.74	8.73	8.70	8.25	6.25	6.56	6.57	6.50	5.82	5.87	—	—
1984	High	—	—	—	—	5.00	5.39	6.10	6.25	5.25	5.85	6.48	6.28	5.75	5.97	5.12	6.48
	Low	—	—	—	—	4.17	4.40	5.20	5.67	4.55	5.30	5.71	5.68	5.38	5.24	4.53	4.17
	Close	—	—	—	—	4.40	5.30	5.74	6.00	4.75	5.85	6.38	5.62	5.75	5.29	4.53	—
1985	High	—	—	—	4.18	4.75	4.50	4.18	4.15	3.90	3.57	3.60					
	Low	—	—	—	3.82	3.90	4.00	3.97	3.84	3.21	3.39	3.26					
	Close	—	—	—	3.96	4.35	4.13	3.98	3.84	3.52	3.55	3.37					

Source: N.Y. Mercantile Exch.

T.528

Rapeseed *(See feature article on page 21T)*

The Foreign Agricultural Service of the USDA in early 1985 forecast 1984/85 world production of rapeseed at 16.17 million metric tons, about 13 percent above the previous record production of 14.27 million tonnes in the 1983/84 season. Sharp increases in the crop in Canada and in the EC-10, and a more moderate increase in Indian production, more than offset a reduction in China's crop. China is the world's largest producer and user of rapeseed, but has made some effort to shift production toward grains.

The world rapeseed crush in the 1984/85 season was forecast by the USDA at 14.26 million tonnes, nearly 6 percent above estimated 1983/84 crushings. World exports of rapeseed were expected to increase to 2.66 million tonnes from an estimated 2.53 million in 1983/84. Canada is the world's largest exporter of rapeseed, with a major share of its exports destined for Japan. World stocks at the end of the 1984/85 season were projected at 758 thousand tonnes versus only 298 thousand at the end of the 1983/84 season, but still below average ending stocks.

Forecast 1984/85 world production of rapeseed oil at 5.28 million tonnes was close to 3 percent above 1983/84 output. World consumption of rapeseed oil was estimated at 5.16 million tonnes, slightly above the 5.12 million tonnes estimated for 1983/84, and ending stocks were projected at 231 thousand tonnes versus 1983/84 estimated ending stocks of 195 million tonnes. The U.S. Food & Drug Administration in early 1985 granted Canadian rapeseed oil "Generally Regarded as Safe" status, which was expected to permit its use in food products in the U.S. Canada and Western Europe are the major exporters of rapeseed oil, while India, Algeria and Nigeria are major net importers.

Producers in the European Community, especially France, have been making progress in production of low erucic acid rapeseed. The "double zero" varieties are also low in glucosinolates and yield meal which can comprise up to 20 percent of hog rations, according to the USDA. Expanded rapeseed meal competes with soybean meal in both Eastern and Western Europe. Large volumes of rapeseed meal are traded within the EC, with West Germany, the Netherlands and Denmark the largest markets for rapeseed meal, which they use in cattle rations. The use of 40 percent protein rapeseed meal is encouraged to supplement and potentially replace the need for imported soybean meal. India is the largest exporter of rapeseed meal, with its major markets the Far East and Eastern Europe. The USDA forecast 1984/85 world rapeseed meal production at 8.63 million tonnes, up from an estimated 8.27 million in the 1983/84 season. Exports were forecast at 1.18 million tonnes versus 1.03 million, and ending 1984/85 world stocks at 271 thousand tonnes compared with 274 million at the end of the 1983/84 season.

A sharp but short-lived advance in rapeseed occurred in the summer of 1984 reflecting strong export demand, and reduced supplies of rapeseed and other oilseeds at that time.

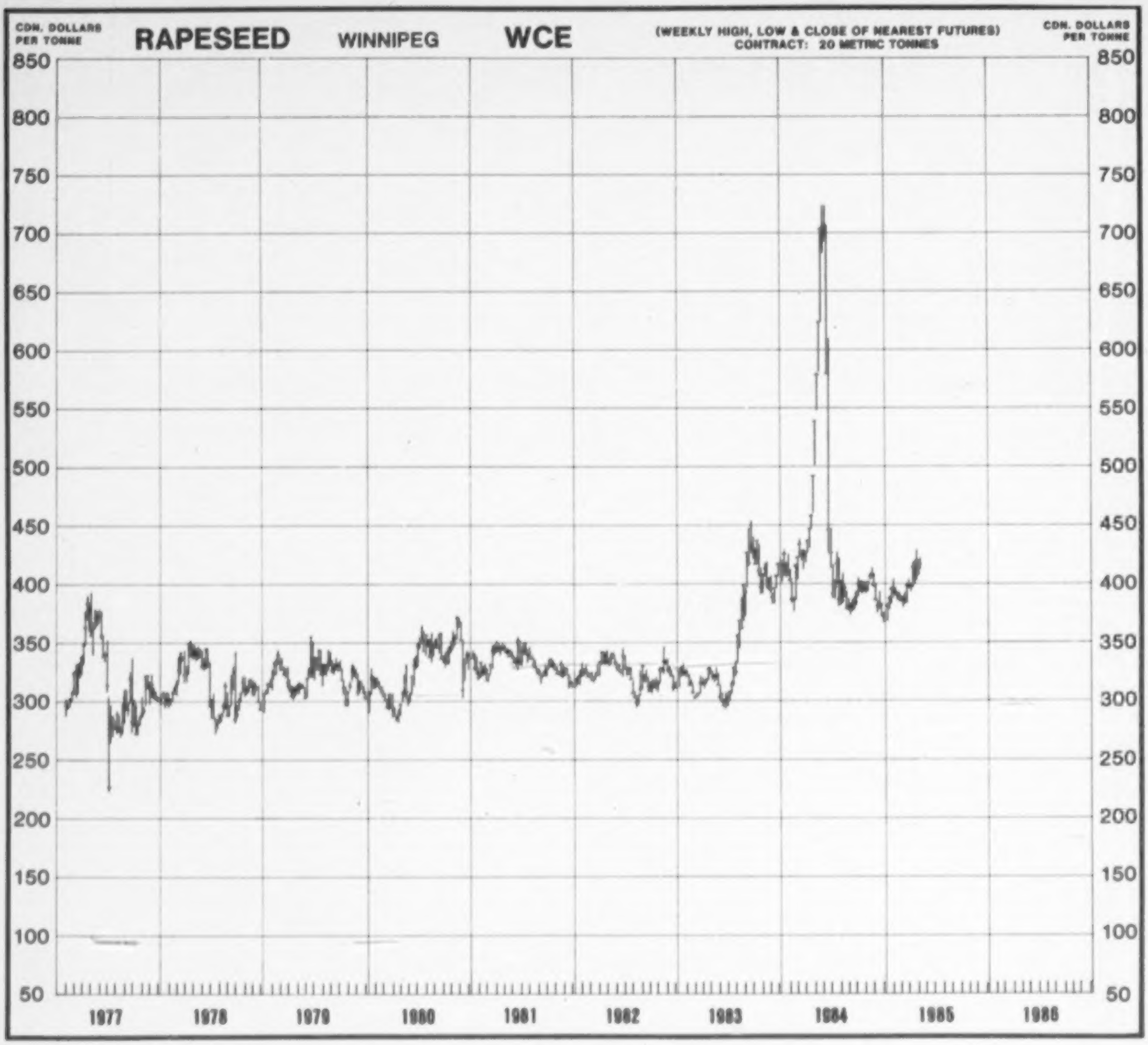
Futures Market

Rapeseed futures are traded on the Winnipeg Commodity Exchange.

World Production of Rapeseed (In Thousands of Metric Tons)

Year[2]	Canada	China	Czechoslovakia	Denmark	France	E. Germany	W. Germany	India	United Kingdom	Bangladesh	Pakistan	Poland	Sweden	Yugoslavia	World Total
1972	2,155	1,000	107.0	51	722.0	234.0	248.7	1,433		106.0	301.0	430.0	327.0		6,624
1973	1,300	1,050	117.0	92	661.0	246.0	242	1,808		98	287.0	512.0	339		7,001
1974	1,207	1,075	85	112	690	200	301	1,692		107	293	523	351		7,022
1975	1,163	1,090	115	115	532	250	194	2,300		110	305	726	327		7,989
1976	1,749			90	561							980	279		
1977	1,973	1,180	162	77	388	308	282	1,650	142	134	236	708	236	40	7,890
1978	3,497	1,868	166	91	568	318	331	1,860	155	137	248	691	289	73	10,721
1979	3,411	2,402	80	150	510	201	321	1,428	198	118	247	233	264	93	10,081
1980	2,484	2,384	214	225	1,103	277	377	2,002	300	122	252	572	285	68	11,107
1981	1,849	4,065	200	290	990	—	363	2,382	325	123	238	496	282	65	12,372
1982[1]	2,246	5,656	178	350	1,147	280	535	2,472	580	120	246	433	320	79	14,783
1983[2]	2,632	4,287	315	260	939	320	599	2,566	580	125	242	553	320	137	14,267
1984[3]	3,246	4,000						2,700							16,170

[1] Preliminary. [2] Harvest generally occurs in the first half of the calendar year given in all major producing countries except Canada. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.533



World Supply & Distribution of Rapeseed & Products In Thousands of Metric Tons

Crop Year	Rapeseed Production	Rapeseed Exports	Rapeseed Imports	Rapeseed Crush	Rapeseed Ending Stocks	Rapeseed Meal Production	Rapeseed Meal Exports	Rapeseed Meal Imports	Rapeseed Meal Consumption	Rapeseed Meal Ending Stocks	Rapeseed Oil Production	Rapeseed Oil Exports	Rapeseed Oil Imports	Rapeseed Oil Consumption	Rapeseed Oil Ending Stocks
1979–80	10,081	2,102	2,403	8,714	1,708	5,206	520	640	5,316	149	3,365	643	571	3,295	159
1980–81	11,107	2,305	2,366	10,478	1,489	6,254	805	636	6,035	199	4,051	824	741	3,980	147
1981–82	12,372	2,142	2,216	11,988	909	7,278	834	683	7,140	186	4,593	822	750	4,521	147
1982–83	14,783	2,390	2,520	13,819	779	8,337	679	871	8,491	224	5,268	837	755	5,180	153
1983–84[1]	14,267	2,528	2,538	13,508	298	8,269	1,034	1,021	8,206	274	5,131	949	976	5,116	185
1984–85[1]	16,170	2,662	2,480	14,262	758	8,631	1,180	982	8,436	271	5,279	1,033	950	5,160	231
1985–86															

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

T.534a

RAPESEED

High, Low & Closing Prices of June Rapeseed Futures in Winnipeg In Dollars per Tonne

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	—	—	—	—	259.0	268.0	272.0	297.0	302.0	294.5	306.1	338.3	351.5	348.0	345.0	351.5
	Low	—	—	—	—	253.0	243.2	244.6	270.2	285.0	279.0	287.0	303.0	316.0	334.8	313.0	243.2
	Close	—	—	—	—	253.0	257.3	272.0	288.5	288.5	287.0	301.3	323.9	346.7	340.6	313.0	—
1979	High	—	286.0	284.0	268.0	284.0	288.0	312.8	304.0	307.5	315.5	340.2	337.7	318.4	316.5	354.5	354.5
	Low	—	278.5	263.7	255.8	258.0	269.0	282.1	289.5	296.0	294.0	314.4	314.0	301.8	306.0	302.5	255.8
	Close	—	286.0	265.2	263.0	270.1	280.0	302.3	300.0	297.0	314.5	336.0	316.3	307.3	307.5	329.5	—
1980	High	301.0	315.9	354.5	351.0	340.0	339.0	340.5	339.0	331.8	342.0	330.5	319.9	295.1	331.2	326.2	354.5
	Low	295.0	299.0	315.9	319.0	321.0	326.7	314.1	320.0	318.5	301.0	318.5	291.0	282.0	287.6	299.5	282.0
	Close	299.0	315.8	329.5	325.5	337.0	335.6	324.0	330.5	319.5	324.5	319.4	291.0	289.5	299.9	317.0	—
1981	High	—	—	—	370.0	383.5	389.0	382.5	375.5	387.5	375.9	351.8	350.6	350.5	348.3	338.3	389.0
	Low	—	—	—	367.5	360.0	365.0	359.1	391.0	325.5	334.0	337.9	334.5	340.0	337.4	326.0	325.5
	Close	—	—	—	367.5	372.5	368.5	376.0	387.0	368.0	337.0	345.8	350.0	347.5	339.1	327.2	—
1982	High	—	—	—	396.0	391.0	378.3	371.8	366.5	353.0	344.0	340.8	333.5	342.8	340.8	331.7	396.0
	Low	—	—	—	384.0	375.5	355.0	358.8	341.6	334.6	331.0	328.0	319.8	327.3	329.7	321.0	319.8
	Close	—	—	—	391.0	375.5	360.3	365.4	344.8	335.1	334.5	332.7	327.0	334.1	332.7	330.0	—
1983	High	—	—	—	—	361.0	366.3	345.5	349.1	340.0	335.9	329.0	321.0	329.3	328.1	308.5	366.3
	Low	—	—	—	—	346.0	332.0	332.6	339.6	322.3	323.1	311.5	311.8	311.0	309.5	292.8	292.8
	Close	—	—	—	—	354.2	337.0	342.5	340.3	325.6	329.1	311.7	316.0	324.7	309.9	297.2	—
1984	High	—	—	—	359.5	434.0	467.4	452.5	435.2	424.5	431.4	412.0	426.5	502.2	724.0	724.0	724.0
	Low	—	—	—	330.0	364.5	415.5	409.0	406.1	397.3	406.5	382.9	403.0	426.0	507.5	577.0	330.0
	Close	—	—	—	350.5	423.6	447.5	409.7	407.8	421.5	410.2	403.5	426.5	502.2	704.0	577.0	—
1985	High	—	—	—	443.9	434.5	417.5	424.1	427.9	417.5	408.8	404.5					
	Low	—	—	—	409.5	413.5	406.5	414.9	415.3	389.8	388.0	395.5					
	Close	—	—	—	413.0	413.7	416.5	417.7	416.8	390.5	397.4	397.4					

Source: Winnipeg Commodity Exchange

T.536

Wholesale Price of Rapeseed Oil, Refined (Denatured), in Tanks at N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1973	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1974	17.5	18.4	21.0	21.0	30.6	45.0	45.0	45.0	46.2	47.5	45.8	59.0	36.8
1975	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	51.2	46.0	46.0	56.2
1976	46.0	46.0	46.0	46.0	46.0	46.0	46.0	44.2	39.0	39.0	39.0	39.0	43.5
1977	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1978	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1979	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1980	47.0	47.0	47.0	47.0	47.0	47.0	47.0	46.0	46.0	46.0	46.0	46.0	46.6
1981	56.4	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	58.8
1982	57.0	55.0	56.8	57.5	56.0	56.0	56.0	56.0	55.7	55.3	55.3	55.3	50.0
1983	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
1984	55.3	55.3	55.3	55.3	55.5	55.5	55.2	55.2					
1985													

Source: Economic Research Service, U.S.D.A.

T.534

Month-End Open Interest of Rapeseed Futures in Winnipeg In 20 Tonne Units

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	9,288	11,435	11,869	11,908	14,442	14,300	17,778	20,456	17,960	18,672	16,707	15,299
1979	15,288	15,164	16,338	15,593	12,993	14,209	12,950	13,596	15,001	21,300	21,827	21,966
1980	15,718	17,516	13,392	14,285	17,722	17,254	17,126	17,108	18,827	22,036	21,911	20,504
1981	15,376	15,326	18,028	18,764	18,000	15,332	14,948	15,316	15,755	16,064	16,260	12,911
1982	13,532	14,970	9,952	12,230	15,997	11,554	12,623	16,948	13,904	15,503	17,992	20,555
1983	16,288	17,964	18,266	16,681	15,327	13,834	18,249	22,681	20,481	18,778	18,302	17,554
1984	14,170	16,807	13,980	13,743	15,220	14,025	14,348	15,822	17,967	15,893	18,046	19,361
1985	20,883	22,483										
1986												

Source: Winnipeg Commodity Exchange

T.535

Rayon and Other Synthetic Fibers

World Production of Rayon &/or Acetate Filament Yarn & Monofilaments In Thousands of Metric Tons

Year	United States	Bel./Netherlands	Brazil	Canada	France	W. Germany	E. Germany	Un. Kingdom	Italy	Japan	India	Poland	Spain	China	USSR	World Total
1977	160.0	36.2	28.8	11.0	20.8	63.7	36.0	62.6	44.4	107.4	58.9	28.6	15.0	61.0	295.0	1,172
1978	164.6	36.0	24.1	12.3	19.3	59.7	34.0	59.7	39.3	109.8	62.4	28.0	13.8	65.0	300.0	1,167
1979	169.4	36.1	24.4	14.1	18.5	58.1	35.0	59.2	38.4	114.3	60.5	27.2	12.6	68.0	298.0	1,176
1980	161.3	37.4	26.0	14.0	16.4	65.2	36.5	36.7	36.6	119.3	57.7	25.4	12.8	75.0	305.0	1,161
1981	138.6	38.3	21.0	13.5	11.0	65.0	37.0	27.0	35.1	118.7	55.9	19.5	12.6	80.0	300.0	1,104
1982	103.4	38.1	20.8	9.5	8.6	61.0	34.0	24.0	31.6	120.5	48.6	19.3	11.3	80.0	294.4	1,025
1983[1]	115.3	41.1	18.4	10.0	8.4	59.0	35.0	25.0	29.3	116.8	46.2	18.2	10.5	85.0	300.0	1,038
1984[2]	104.6															

[1] Preliminary. [2] Estimate. *Source: Textile Organon* T.537

World Production of Rayon &/or Acetate Staple & Tow In Thousands of Metric Tons

Year	United States	Austria	China	Czechoslovakia	France	W. Germany	E. Germany	Un. Kingdom	Italy	Japan	Poland	Spain	Sweden	India	USSR	World Total
1977	242.7	90.2	77.0	50.6	60.7	46.0	131.0	113.6	62.3	272.7	67.1	43.1	33.1	87.1	334.0	2,109
1978	245.7	96.0	80.0	49.5	55.2	49.0	129.2	124.4	46.9	279.4	65.4	46.6	36.9	92.0	335.0	2,151
1979	252.4	98.8	85.0	36.0	58.9	50.0	130.0	139.2	39.0	290.4	56.6	45.3	36.9	92.2	337.0	2,195
1980	204.3	100.6	95.0	34.9	49.6	46.0	132.0	109.3	27.5	278.0	61.0	40.1	34.9	74.7	345.0	2,081
1981	210.7	107.9	105.0	36.0	42.9	50.0	132.0	102.4	24.4	273.5	44.4	37.8	34.7	94.5	345.5	2,100
1982	161.5	100.8	105.0	35.5	36.9	50.0	127.8	89.2	14.2	258.8	45.1	31.8	38.0	52.8	340.5	1,917
1983[1]	170.0	109.7	112.0	37.9	29.5	55.0	130.1	115.2	0	267.9	51.2	21.5	39.3	69.2	345.0	1,975
1984[2]	176.5															

[1] Preliminary. [2] Estimate. *Source: Textile Organon* T.538

World[5] Production of Non-Cellulosic Man-Made Fibers (Except Olefin) In Thousands of Metric Tons

	United States															
		Non-Cellulose Fiber[2]														
Year	Text. Glass Fiber[1]	Yarn[3]	Staple[4]	Total	Total[5]	Canada	France	W. Germany	Italy/Malta	Taiwan	Japan	Korea	Benelux	USSR	United Kingdom	World Total
1977	357	1,415	1,622	3,037	3,392	112.8	243.9	690.2	330.1	364.4	1,280	349.9	139.3	456.0	358.8	9,149
1978	419	1,467	1,751	3,218	3,637	123.1	246.4	729.4	354.4	464.2	1,376	432.5	142.7	475.0	406.4	10,034
1979	460	1,595	1,889	3,484	3,944	121.6	224.0	759.5	360.2	521.3	1,363	477.3	135.6	476.0	381.1	10,601
1980	393	1,412	1,831	3,243	3,635	122.0	192.0	720.1	354.8	557.8	1,357	536.4	104.3	550.0	287.6	10,476
1981	472	1,439	1,837	3,276	3,748	105.9	201.2	752.2	435.3	587.0	1,329	610.4	105.7	572.8	249.3	10,827
1982[6]	408	1,121	1,482	2,603	3,011	97.0	190.1	701.9	428.7	630.9	1,304	612.4	89.8	593.8	204.3	10,140
1983[7]	530	1,294	1,715	3,009	3,539	112.3	198.3	757.7	455.0	737.4	1,318	663.9	83.2	622.0	227.7	11,102
1984[7]	632	1,280	1,700	2,980	3,612											

[1] Textile glass fiber of all types, including some staple. [2] Acrylic fiber, nylon, polyester, saran, etc. [3] Includes monofilaments as well as some saran staple. [4] Includes tow, but does not include some saran staple. [5] The textile glass fiber data are included in the U.S. total & excluded from the rest of the world data. [6] Preliminary. [7] Estimate. *Source: Textile Organon* T.539

Man-Made Fiber Production in the United States In Millions of Pounds

	Rayon & Acetate															
	Rayon Yarn				Staple & Tow				Non-Cellulosic Fiber						Producers' Waste Shipments	
Year	Indust.	Textile	Acet. Yarn	Total Yarn	Rayon	Acetate	Total	Total	Yarn	Staple	Total	Total Ray. & Acet. & Non-Cel.	Textile Glass Fiber	Total Man-made Fiber	Rayon	Non-Cell.
1977	55.3	15.4	282.0	352.7	527.0	8.0	535.0	887.7	3,674.1	3,653.8	7,327.9	8,215.6	786.7	9,002.3	18.5	291.0
1978	47.0	15.0	300.9	362.9	534.6	7.0	541.6	904.5	3,830.3	3,952.7	7,783.0	8,687.5	923.3	9,610.8	15.7	263.9
1979	41.7	15.1	316.6	373.4	549.4	7.0	556.4	929.8	4,154.3	4,282.3	8,436.6	9,336.4	1,014.4	10,380.8	17.2	238.6
1980	32.2	15.0	308.5	355.7	443.3	7.0	450.3	806.0	3,744.3	4,148.2	7,892.5	8,698.5	867.3	9,565.8	13.5	170.2
1981	33.4	15.1	257.0	305.5	460.6	4.0	464.6	770.1	3,814.8	4,191.1	8,005.9	8,776.0	1,041.1	9,817.1	15.3	174.2
1982	20.8	12.4	195.2	228.4	355.0	1.0	356.0	584.4	3,057.4	3,402.5	6,459.9	7,044.3	899.2	7,943.5	10.7	173.2
1983	15.3	11.2	227.6	254.1	374.8	1.4	376.2	630.3	3,567.8	3,970.6	7,538.4	8,168.7	1,167.2	9,335.9	9.4	214.1
1984[1]	20.2	12.1	198.2	230.5	389.2	.4	389.6	620.1	3,524.4	3,947.3	7,471.7	8,091.8	1,394.0	9,485.8	11.4	216.9

[1] Preliminary. *Source: Textile Organon* T.543

RAYON AND OTHER SYNTHETIC FIBERS

U.S. Rayon and Acetate Distribution In Millions of Pounds

	Yarn & Monofilaments								Staple & Tow & Fiber Fill						
	Producers' Shipments								Producers' Shipments						
	To Domestic Consumers								To Domestic Consumers						
Year	Industrial	Textile	Acetate	Total	Export	Total	Import	Domestic Consump.	Rayon	Acetate	Total	Export	Total	Import	Domestic Consump.
1979	——55.0——		288.4	343.4	31.8	375.2	13.3	356.7	442.4	7.0	449.4	100.1	549.5	16.5	465.9
1980	——47.5——		269.2	316.7	32.7	349.4	8.3	325.0	390.7	7.0	397.7	61.0	458.7	10.3	408.0
1981	——46.6——		226.3	272.9	34.8	307.7	10.7	283.6	396.9	4.0	400.9	59.8	460.7	16.8	417.7
1982	——30.1——		169.0	199.1	29.8	228.9	7.0	206.1	293.7	1.0	294.7	66.5	361.2	13.4	308.1
1983	——25.3——		197.6	222.9	28.2	251.1	8.7	231.6	333.5	1.4	334.9	43.9	378.8	13.6	348.5
1984[1]	——30.1——		180.1	210.2	18.2	228.4	10.0	220.2	331.9	.4	332.3	66.5	398.8	17.0	349.3

[1] Preliminary. *Source: Textile Organon*

T.540

U.S. Domestic Shipments of Synthetic Fibers In Millions of Pounds

	Yarn & Monofilaments								Staple & Tow						
	Cellulosic				Non-Cellulosic				Non-Cellulosic						
	Rayon														
Year	Industrial	Textile	Acetate	Total	Nylon	Olefin[2]	Polyester & Other	Total[3]	Rayon	Nylon	Acrylic & Mod-Acrylic	Olefin & Vinyon	Polyester	Total	Textile Glass Fiber
1979	——55.0——		288.4	343.4	1,631	624.2	1,525	3,798	442.4	913.2	546.6	119.3	2,134	3,714	922.6
1980	——47.5——		269.2	316.7	1,539	611.7	1,363	3,532	390.7	711.2	585.3	115.0	2,071	3,483	874.4
1981	——46.6——		226.3	272.9	1,404	628.3	1,430	3,483	396.9	696.4	494.1	132.0	2,005	3,328	982.0
1982	——30.1——		169.0	199.1	1,166	577.0	1,135	2,894	293.7	673.3	457.9	138.9	1,768	3,038	875.6
1983	——25.3——		197.6	222.9	1,392	698.6	1,294	3,385	333.5	897.1	492.2	183.4	2,099	3,672	1,166
1984[1]	——30.1——		180.1	210.2	1,438	725.6	1,145	3,309	331.9	814.4	446.7	240.9	1,992	3,494	1,274

[1] Preliminary. [2] Includes film fiber. [3] Includes Saran & Spandex. *Source: Textile Organon*

T.541

U.S. Mill Consumption of Fiber & Products & Per Capita Consumption

	Mill Consumption (Million Pounds)											Per Capita Domestic[4] Consumption (Pounds)				
Year	Yarn & Monofilaments	Staple & Tow	Total R. & A.[2]	Noncellulosic Fiber	Textile Glass Fiber	Waste	Total Man-made[3]	Cotton	Wool	Silk	Grand Total	Non-cell. Man-made Fibers	Rayon & Acetate	Cotton	Wool	Total
1979	356.7	465.9	822.6	7,692	922.6	130.4	8,697	3,066	134.4	1.5	11,899	38.0	3.7	14.9	1.0	57.4
1980	325.0	408.0	733.0	7,145	874.4	83.0	8,064	3,064	137.8	1.5	11,267	34.3	3.2	14.6	.9	53.0
1981	283.6	417.7	701.3	7,007	982.0	129.8	7,862	2,731	152.7	2.0	10,748	34.8	3.1	14.4	1.0	53.4
1982	206.1	308.1	514.2	6,131	875.6	132.8	6,775	2,479	129.5	2.0	9,386	31.2	2.3	13.5	.9	48.0
1983[1]	231.6	348.5	580.1	7,396	1,166.1	197.2	8,154	2,796	162.5	2.0	11,114	38.3	2.6	15.8	1.2	57.9
1984[1]	220.2	349.3	569.5	7,202	1,273.8	188.0	7,938	2,669	163.2	3.0	10,771					

[1] Preliminary. [2] Rayon and acetate. [3] Man-made fiber data include only glass fiber for textile end uses. [4] Mill consumption adjusted for Raw Fiber Equivalent of Net U.S. Trade in Textile Mfg. *Source: Textile Economics Bureau*

T.542

United States Imports of Man Made Fiber Manufactures In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	47.07	36.31	39.06	38.47	45.19	53.03	52.25	50.84	44.58	42.35	40.18	35.64	524.97
1980	36.39	39.90	39.62	37.37	46.72	55.92	57.69	50.18	52.11	49.18	40.10	35.46	540.64
1981	46.72	38.55	43.81	45.53	57.83	58.01	66.66	69.32	56.77	67.24	49.12	39.51	639.08
1982	53.18	48.07	47.74	40.14	67.85	91.93	77.34	100.05	82.75	70.14	68.76	59.16	807.10
1983	79.98	71.92	76.53	73.20	86.99	105.55	98.14	108.25	98.34	106.84	85.83	77.93	1,069.5
1984	100.34	118.86	110.21	110.50	114.35	122.45	169.47	127.72	114.80	98.79	80.83		

Source: Department of Commerce

T.544

United States Exports of Man Made Fiber Manufactures In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	42.86	43.91	53.20	45.03	49.28	52.81	44.92	46.69	50.61	56.16	53.00	58.12	596.58
1980	47.25	59.36	69.55	69.01	64.85	70.85	58.44	63.79	63.29	75.94	64.97	64.27	771.54
1981	53.16	53.50	67.33	64.83	58.05	58.78	47.59	49.70	48.77	50.98	46.95	38.08	637.73
1982	34.90	38.35	39.72	35.96	42.01	44.21	33.93	33.13	35.86	36.87	32.54	31.08	438.55
1983	37.97	36.34	43.40	43.45	40.39	39.80	35.00	36.21	39.50	36.97	36.44	35.24	460.71
1984	35.08	37.05	40.21	38.50	42.79	46.53	40.63	44.02	43.94	44.51	36.94		

Source: Department of Commerce

T.545

Rice

The USDA projected world production of rice in the 1984/85 season at 313.8 million metric tons, a record crop and 2 percent above 1983/84 world production. As of January 1985, the 1984/85 production in China, the world's largest rice producer, was estimated at a record 123.2 million tons, or 4 percent above a year earlier. Record increases in yield influenced an upward adjustment in China's production. Production in Thailand during 1984/85 was estimated at 12.2 million tons, 4 percent under Thailand's record production for 1983/84. And the production of rice in Brazil during 1984/85 was projected at 6.1 million tons.

Larger crops of rice in several major importing countries during 1984/85 were expected to reduce world rice import demand in 1985. It was expected that Indonesia could import 800,000 tons of rice in 1985 as storage space became available. Imports of 1.2 million tons in 1983 made Indonesia the world's largest importer of rice. In the Philippines, political unrest and economic instability resulted in the Philippine government importing rice for the first time since 1977. Much of India's 1984/85 rice crop was severely damaged both by monsoon weather and by flooding in some parts of the country. The 1984/85 Indian rice crop was forecast at 86 million tons, 3 percent under the 1983/84 harvest. India's imports of milled rice during 1985 were expected to total 500,000 tons, considerably below the 800,000 forecast for 1984, but still significant compared with previous years. Bangladesh, like eastern India, suffered heavy flood damage to its 1984/85 rice crop, and an estimated 700,000 to 900,000 tons may have been lost. Bangladesh's 1984 imports of rice were estimated at 650,000 tons.

Thailand's 1984/85 rice harvest was forecast at 18.5 million tons and rice exports were expected to amount to a record of over 4.2 million tons. Japan was not expected to export rice in 1985 after shipping only 100,000 tons in 1984. Rice exports from Burma were forecast at 900,000 tons in 1985, up sharply from 1984 exports of 850,000 tons due in part to government programs to expand rice production. China's rice exports in 1985 were expected to amount to 600,000 tons in 1985, nearly equal to the 1984 level.

In the U.S., a 30 percent increase in harvested area and a 6 percent increase over yields in the 1983/84 season was expected to result in a rice crop of 136.4 million cwt. in 1984, or about 37 percent over the PIK-reduced and drought-damaged 1983 crop. Out of approximately 2.796 million acres harvested for the 1984 U.S. rice crop, 2.1 million, or 75 percent, were expected to be for long grain rice.

The 1985 U.S. rice program requires participants to reduce planted base acreage by a total of 35 percent and to comply with a 20 percent acreage reduction program (ARP) and a 15 percent cash land diversion (CLD). The target price was set at $11.90 per cwt., loan rates were set at $8, and the diversion payment rate amounted to $3.50. The diversion payment rate assumed a carryover on July 31, 1985 in excess of 42.5 million cwt.

Futures Market

Rice is listed on the MidAmerica Commodity Exchange, but is inactive pending contract changes.

World Rice[3] Supply & Distribution In Millions of Metric Tons

	Production			Exports			Imports			Utilization			Stocks (End)		
Year	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
1981	6.6	392.2	398.8	3.0	10.1	13.1	—	13.1	13.1	2.1	270.1	272.2	.5	21.5	22.1
1982	8.3	404.3	412.5	2.5	9.1	11.6	—	11.6	11.6	2.2	279.1	281.3	1.6	19.7	21.3
1983	7.0	412.3	419.3	2.3	9.6	11.9	—	11.9	11.9	2.0	287.5	289.5	2.3	15.0	17.3
1984[1]	4.5	446.7	451.2	2.1	10.3	12.5	—	12.5	12.5	1.8	305.4	307.1	1.5	15.6	17.1
1985[2]	6.2	458.5	464.7	2.0	9.6	11.6	—	11.6	11.6	1.9	312.3	314.2	2.0	17.4	19.5

[1] Preliminary. [2] Forecast. [3] Production is on rough basis; the rest are on milled basis. *Source: Foreign Agricultural Service, U.S.D.A.* T.547a

World Production of Rough Rice In Millions of Metric Tons

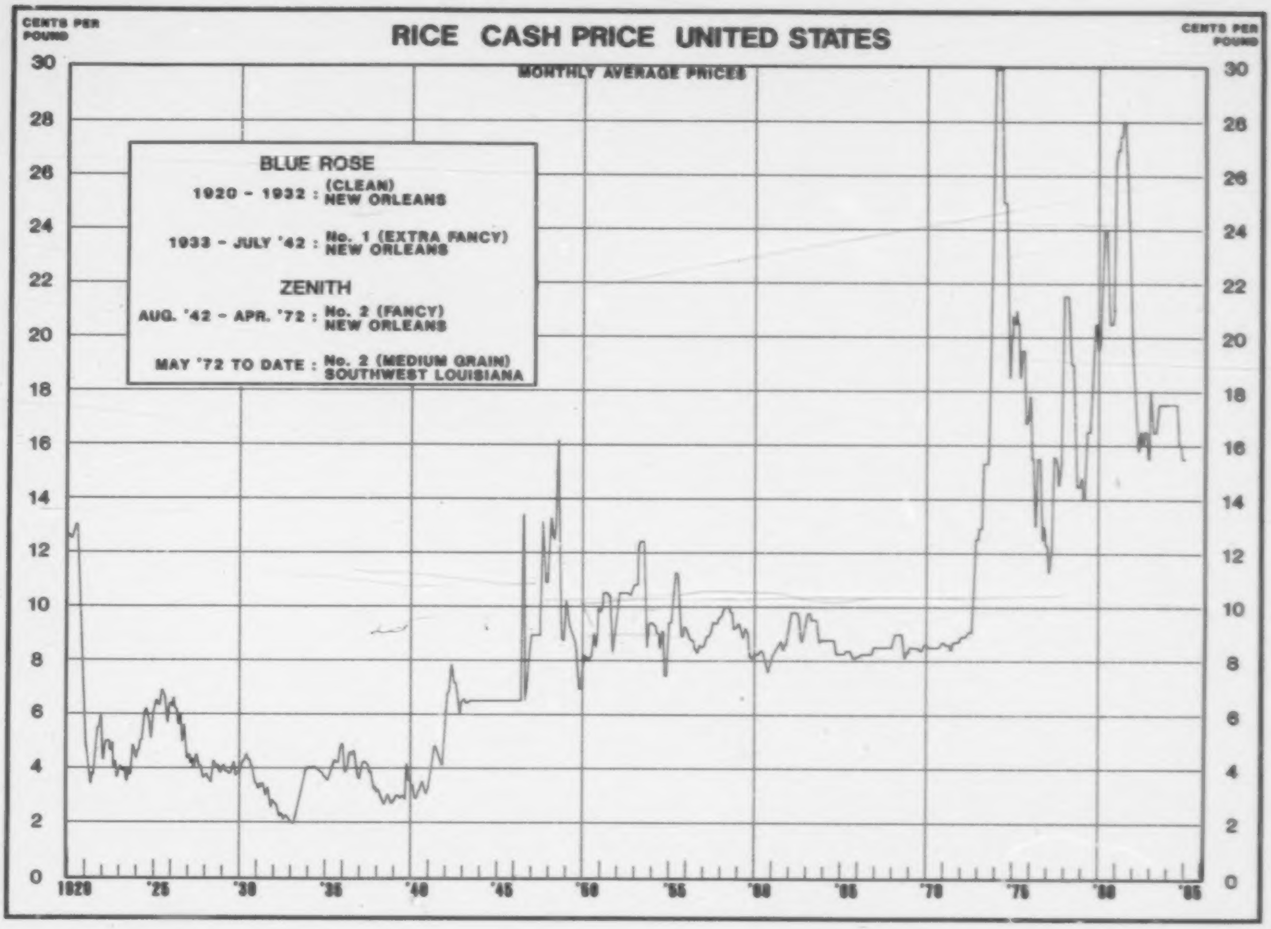
Crop Year	Brazil	Burma	China	Vietnam	India	Japan	Indonesia	Rep. of Korea	Bangladesh	Philippines	Pakistan	Taiwan	Thailand	United States	World Total
1981–2	9.2	14.1	144.0	12.6	80.0	12.8	32.8	7.1	20.5	8.1	5.1	3.1	17.8	8.3	412.5
1982–3	7.8	14.4	161.2	13.8	70.7	12.8	33.6	7.3	21.3	7.7	5.2	3.1	16.9	7.0	419.3
1983–4[1]	9.0	14.4	168.9	14.0	89.7	13.0	35.3	7.6	21.8	7.9	5.0		19.6	4.5	451.2
1984–5[2]	9.0	14.4	178.1	13.8	89.3	14.2	38.0	8.0	21.6	7.9	5.1		18.5	6.2	464.7

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.547

World Exports of Rice (Milled Basis), by Country of Origin In Thousands of Metric Tons

Year	Australia	Brazil	Guyana	Burma	P.R. China	Egypt (U.A.R.)	Uruguay	Pakistan	EC-10	Japan	Nepal	Taiwan	Thailand	United States	World Total
1981	335	—	78	674	583	134	215	1,127	812	795	43	92	3,049	3,008	13,128
1982	530	—	35	701	460	22	227	794	627	318	50	307	3,620	2,487	11,616
1983[1]	281		45	750	550	21	189	1,299	793	321	0	531	3,700	2,330	11,886
1984[2]	300		40	750	900	50	155	1,057	805	102	20	275	4,528	2,129	12,469

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.552



Average Wholesale Price of Rice No. 2 (Medium Grain)[1] Southwest Louisiana Dollars per cwt. Bagged

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1976–7	13.5	12.5	13.0	12.3	12.3	11.3	11.8	12.1	13.3	15.6	15.5	15.3	13.2
1977–8	14.5	15.0	15.4	20.5	21.5	21.5	—	21.5	20.5	19.0	—	18.5	18.8
1978–9	17.5	14.5	14.5	14.5	14.8	14.0	14.0	14.0	16.5	16.5	16.5	16.5	15.3
1979–0	19.0	20.0	20.5	20.5	19.5	20.0	22.0	23.5	24.0	24.0	22.0	21.0	21.3
1980–1	20.5	20.8	21.6	24.4	26.4	27.0	27.1	27.5	27.6	28.0	28.0	27.8	25.6
1981–2	26.4	24.2	22.9	21.2	20.0	18.8	17.8	16.1	16.0	16.4	16.2	16.0	19.3
1982–3	16.5	16.5	16.5	16.7	17.8	17.3	16.5	16.5	16.5	17.1	17.5	17.5	16.9
1983–4[2]	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1984–5[2]	16.0	16.0	15.5	15.5	15.5	15.5							

[1] U.S. No. 2—Broken not to exceed 4%. [2] Preliminary. *Source: Bureau of Labor Statistics* (0213–0101) T.549

U.S. Rice (Rough) Production by Type and Variety In Thousand Cwt.

Year	Long Grain	Medium Grain	Short Grain	Total	Year	Long Grain	Medium Grain	Short Grain	Total
1975	63,593	52,255	12,589	128,437	1980	86,851	51,407	7,892	146,150
1976	70,051	36,792	8,805	115,648	1981	110,426	61,497	10,819	182,742
1977	62,206	26,272	10,745	99,223	1982	93,424	51,342	8,871	153,637
1978	84,792	36,454	11,924	133,170	1983	64,318	27,388	8,014	99,720
1979	80,692	40,421	10,834	131,947	1984[1]	97,368	32,490	7,175	137,033

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.548

Salient Statistics of Rice, Rough & Milled (Rough Equivalent) in the United States In Thousands of Cwt.

Year Beginning August	Supply				Distribution					Government Support Program					
					Domestic						Under Price Support				
	Stocks Aug. 1	Production	Imports[2]	Total Supply	Food[3]	Industry[4]	Seed	Total	Exports	Owned By CCC Aug. 1	Loans	Purchase Agree.	Total	Deliveries to CCC	Support Rate $ Cwt.
1979–0	31,618	131,947	100	163,600	33,200	11,200	4,800	49,200	82,600	8,300	25,911	—	25,911	—	6.79
1980–1	25,679	146,150	—	172,100	38,400	11,000	5,100	64,200	91,400	1,700	24,973	—	24,973	—	7.12
1981–2[1]	16,493	182,742	—	199,500	42,500	12,700	4,400	68,600	82,000	—	42,848	—	42,848	17,500	8.01
1982–3[5]	48,987	153,637	—	203,100	37,300	13,500	3,200	62,900	68,900	17,500	65,375	—	65,375	6,120	8.14
1983–4[5]	71,440	99,720	—	171,900	33,400	12,400	3,900	54,700	70,300	22,320	40,184	766	40,950	23,866	8.14
1984–5[5]	46,909	137,033	—	183,900	38,000	13,000	3,000	59,000	62,000	25,000					8.00

[1] Preliminary. [2] Consists mostly of broken rice. [3] Includes shipments to territories and military food use. [4] Primarily for beer-production. [5] Projected. *Source: Agricultural Marketing Service, U.S.D.A.*

T.551

Acreage, Yield, Production, and Prices of Rice in the United States

Crop Year	Acreage Harvested (1,000 Acres)			Yield Per Harvested Acre (in Lbs.)			Production 1,000 Cwt.			Farm Value of Production $1,000	Farm Price of Rough Rice $ Per Cwt.	Wholesale Prices ($ Per Cwt.)	
	Southern States	California	United States	Southern States	California	United States	Southern States	California	United States			Arkansas[2]	Houston[3]
1979–0	2,347	522	2,869		6,520	4,599	97,905	34,042	131,947	1,383,993	10.50	20.05	22.05
1980–1	2,747	565	3,312		6,440	4,413	109,764	36,386	146,150	1,873,007	12.80	25.30	25.55
1981–2	3,199	593	3,792		6,900	4,819	141,818	40,924	182,742	1,654,413	9.05	19.40	21.15
1982–3[1]	2,727	535	3,262		6,700	4,710	117,740	35,848	153,637	1,245,599	8.11	16.80	18.70
1983–4[1]	1,891	328	2,169		7,040	4,598	76,631	23,089	99,720	811,721	8.76	17.35	19.88
1984–5[1]	2,352	430	2,782		7,040	4,926	113,944	23,089	137,033		8.30		

[1] Preliminary. [2] F.O.B. mills, Houston, Texas (medium grain). From 1979–80 prices are at southwest Louisiana. [3] Houston, Texas (long grain). *Source: Economic Research Service, U.S.D.A.*

T.550

U.S. Exports of Milled Rice[1] by Country of Destination In Thousands of Metric Tons

Crop Year	Belg.-Lux.	South Africa	Canada	Un. Kingd.	South Korea	Nigeria	Indonesia	Italy	Bangladesh	Liberia	Saudi Arabia	Switzerland	Iraq	Iran	Total All Exports
1979–0	85.0	105.5	77.6	30.1	574.7	137.9	225.1	42.5	—	61.9	169.5	63.3	309.6	31.1	2,706
1980–1	101.6	112.4	93.3	19.3	1,048.8	283.2	138.8	11.5	—	85.1	257.0	69.5	71.4	—	3,028
1981–2[2]	118.4	114.1	101.0	30.5	281.6	412.8	15.8	201.4	22.6	88.4	277.7	91.1	221.1	147.2	2,683
1982–3[2]		109.3	100.6		187.8	168.7	63.4		67.3	91.3	279.1		279.2	—	2,219
1983–4[2]															2,270

[1] No adjustment of brown & parboiled rice has been made; treated as milled rice. [2] Preliminary. *Source: Bureau of the Census, Dept. of Commerce*

T.553

* Exports of Rice From the United States In Millions of Pounds[1] (Clean Basis)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1979–0	310	316	426	320	546	584	557	584	518	585	540	644	5,930
1980–1	419	577	409	474	730	533	613	809	688	794	497	371	6,914
1981–2	453	470	532	583	458	479	515	399	487	661	538	370	5,945
1982–3	809	320	431	199	307	241	316	490	446	438	550	360	4,907
1983–4	488	624	460	378	359	299	220	462	432	420	431	314	4,587
1984–5	384	566	331	343	307								

[1] 162 pounds rough—100 pounds clean. *Source: Department of Commerce*

T.554

Avg. Price Received by Farmers for Rice (Rough) in the U.S. In Dollars Per 100 Pounds (Cwt.)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[1]
1979–0	10.00	9.81	10.30	9.83	8.41	9.88	11.00	11.70	11.60	11.30	10.20	10.80	10.50
1980–1	10.60	10.20	10.90	11.60	13.10	13.20	13.00	13.40	13.80	13.30	11.90	12.80	12.80
1981–2	11.80	10.70	10.20	9.86	9.34	9.34	9.46	9.46	8.54	8.55	8.54	8.25	9.05
1982–3	7.31	7.75	7.73	7.78	8.06	8.05	8.26	7.99	8.23	8.23	7.88	7.95	8.11
1983–4	8.41	8.48	8.80	8.80	8.66	8.57	8.85	8.63	8.49	8.24	8.20	8.18	8.76
1984–5[2]	8.22	8.17	8.08	8.13	8.08	8.14	7.72	7.84					

[1] Weighted average by sales. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.555

Rubber

World natural rubber production in 1984, based on preliminary data of the International Rubber Study Group (IRSG), was close to 8 percent above estimated 1983 production of 4.02 million tonnes.

IRSG estimated 1984 natural rubber production in Malaysia, the world's largest producer, at 1.53 million tonnes versus 1.56 million in 1983. There was some belief that 1985 production would be somewhat smaller than in 1984 due to normal "wintering" of trees. The Primary Industries Ministry projected an increase in exports to 1.62 million tonnes from 1.60 million in 1984. Efforts were being made to develop and produce new types of rubber to penetrate market areas currently dominated by synthetic rubber.

Indonesian natural rubber output in 1984 was close to 19 percent above 1983 output, according to preliminary ISRG data. The increase primarily reflected a rejuvenation and expansion program over the past 5 years through replantings, yield stimulation practices, and improved organization of smallholders, who account for nearly 80 percent of production. A World Bank report in early 1984 indicated that declining Malaysian production because of higher labor costs and competition for land from other tree crops should provide Indonesia with an opportunity to increase its market share. This prospect would be enhanced if Indonesia were to upgrade production from the low grades SIR20 and SIR50, which account for about two-thirds of Indonesian rubber exports. The World Bank report also noted that world rubber demand is expected to increase at a faster pace over the next 15 years than in the 1960's and 1970's. Indonesia hopes to increase production to around 1.32 million tonnes by 1990/91, and to export as much as 1.21 million tonnes by then.

ISRG estimated a slight reduction in 1984 natural rubber production in Thailand, the world's third largest producer, from estimated 1983 output of 587,000 tonnes. Output was expected to increase by 6.5 percent in 1985, to 650,000 tonnes, according to that country's Commerce Ministry, which forecast a 7.1 percent increase in 1985 exports, to 600,000 tonnes. The Ministry expected Japan, which usually imports more than one-half of Thailand's rubber exports, to import 360,000 tonnes in 1985, based primarily on expectations of increased auto production in Japan.

World rubber consumption increased by about 7.5 percent in 1984 to a record-large 13.2 million tonnes from 12.28 million in 1983, according to preliminary data of the IRSG. Synthetic rubber consumption in 1984 was estimated at 8.92 million tonnes vesus 8.3 million in 1983, and natural rubber usage at a record 4.27 million tonnes versus 3.98 million. The gain in estimated 1984 world rubber consumption was attributed primarily to improved economies in leading industrial countries, including the U.S. and Japan.

Growth in world rubber consumption is geared primarily to developments in the automotive industry. According to the IRSG, tire manufacture accounts for more than 50 percent of world usage of natural and synthetic rubber, and for natural rubber alone, tire use accounts for about 70 percent and could represent an even larger share. In addition to tires, a typical U.S. automobile is said to contain about 150 pounds of rubber byproducts such as belting, v-belts and hoses. According to the Rubber Manufacturer's Association, U.S. replacement tire demand is expected to decline and demand for tires to flatten out because of improved product performance, while industrial demand for rubber is expected to increase.

Early 1985 prospects favored a further increase in world rubber consumption in 1985. Japanese consumption of natural and synthetic rubber was expected to increase to a record-large tonnage in 1985. Meanwhile, a factor which could influence both supply and demand for natural rubber is the reduced price of crude oil.

Consumption of synthetic rubber worldwide in 1984 dipped slightly below production, according to preliminary IRSG data, versus revised data for 1983 which indicated that production virtually equaled consumption in that year. The International Institute of Synthetic Rubber Producers (IISRP), estimated total 1984 synthetic rubber consumption in the U.S at 2.21 million tonnes versus 2.01 million in 1983, and estimated 1985 consumption at 2.24 million tonnes. IISRP projected annual North American rubber demand to rise through 1989 but at a slower rate than in expected growth in gross national product. Synthetic rubber consumption in Western Europe in 1984 was estimated by IISRP at 1.44 million tonnes versus an estimated 1.40 million in 1983, and projected 1985 use of 1.47 million tonnes. The trend towards downsizing tires is expected to limit growth of rubber use in Western Europe to 1.8 percent annually through 1989, with synthetic rubber use forecasts pointing to an underutilization of capacity.

Rubber prices declined sharply from early 1984 highs which had arisen from expected seasonally tight supplies due to wintering in of trees in Asia and optimism regarding the global economic outlook. However, production in the three major producing countries did not experience a normal seasonal reduction in February–April output. In addition, unexpectedly low consumer demand in Western Europe, primarily because of foreign exchange problems, operated against price firmness. Competition from cheaper synthetic rubber was also said to be a factor in weak natural rubber prices.

Late in 1984, the International Natural Rubber Organization (INRO) 5-day moving average price moved down to within the 155 to 177 cent "may buy" area for the first time since February 1983, and the buffer stock manager bought a small amount of rubber. The buffer stock in early 1985 amounted to an estimated 270,000 tonnes, about 30,000 tonnes short of the 300,000 tonne level at which a special council session must be called to revise the buffer stock price bands downward. The International Rubber Agreement expires in October 1985 and can be extended only for a maximum of two years. Its main function is to maintain international rubber prices through a buffer stock mechanism and ensure a balance between world supply and demand.

Futures Market

Rubber futures are traded on the London Commodity Exchange, with contract revisions under consideration.

World Rubber Production[1] In Thousands of Metric Tons

	Natural										Synthetic						
Year	Sri Lanka	India	Indonesia	Malaysia	Philippines	Thailand	Liberia	Brazil	China	World Total	Canada	W. Germany	Japan	United States	United Kingdom	USSR	World Total
1978	155.7	133.0	902.5	1,582	56.6	467.0	72.5	23.7	101.6	3,770	248.3	407.0	1,029	2,662	293.7	1,950	8,955
1979	152.7	147.2	905.0	1,570	63.3	531.2	75.0	25.0	108.3	3,870	282.5	418.5	1,107	2,720	277.7	2,025	9,370
1980	133.2	155.4	1,020	1,530	69.9	501.1	77.5	27.8	113.0	3,845	252.8	389.9	1,094	2,215	211.8	2,040	8,690
1981	123.9	150.7	867.5	1,510	75.3	504.0	77.5	30.3	127.7	3,705	263.3	396.8	1,010	2,225	224.0	2,000	8,515
1982	126.2	165.9	880.0	1,494	74.2	552.2	67.5	32.8	152.6	3,755	181.7	383.8	930.7	1,817	243.9	1,950	7,830
1983[2]	140.0	168.0	997.2	1,562	75.0	587.2	65.0	35.2	172.4	4,025	182.0	418.0	1,003	1,985	259.7	1,970	8,290
1984[3]	125	180	1,105	1,495	78	571	68	37	180	4,220	217.8	437.6	1,100	2,175	284.3	2,100	8,875

[1] Including rubber in the form of latex. [2] Preliminary. [3] Estimate. *Source: Rubber Study Group* T.556

World Consumption of Natural and Synthetic Rubber In Thousands of Metric Tons

	Natural									Synthetic						
Year	Australia	Brazil	Canada	France	W. Germany	Japan	Un. Kingdom	United States	World Total	Canada	France	W. Germany	Japan	Un. Kingdom	United States	World Total
1978	41.1	72.5	89.1	163.2	184.9	355.0	139.2	770.8	3,750	203.9	296.2	429.5	741.0	313.4	2,519	8,860
1979	45.4	75.9	93.8	177.0	184.5	390.0	137.5	740.4	3,880	232.0	317.8	447.1	830.0	301.1	2,501	9,210
1980	42.2	81.1	80.0	187.7	179.7	427.0	130.8	585.0	3,760	200.0	341.9	421.3	885.0	248.2	1,980	8,780
1981	41.9	74.4	82.0	167.2	169.1	436.0	120.0	635.0	3,700	210.0	303.4	396.2	851.0	245.0	2,022	8,535
1982	36.4	67.8	76.0	156.8	171.2	439.0	118.0	585.0	3,680	182.0	265.2	386.9	797.0	230.0	1,765	7,990
1983[1]	30.9	70.2	87.0	155.9	179.5	504.0	120.0	665.0	3,985	195.0	276.6	395.8	851.0	225.0	1,883	8,325
1984[2]	34	75	92	156.5	185	515	118	750.7	4,200	210	304.9	400	927	247	2,070	8,805

[1] Preliminary. [2] Estimate. *Source: Rubber Study Group* T.557

World Stocks[1] of Natural Rubber, January 1 In Thousands of Metric Tons

	In Producing Countries								In Consuming Countries (Commercial Stocks)									
Year	Brazil	Vietnam	Sri Lanka	Indonesia	Malaysia (Peninsular)	Singapore	Thailand	Total	Australia	Canada	China	France	W. Germany	India	Japan	United Kingdom	United States	Total
1979	19.1	4.0	47.4	75.0	245.5	35.8	60.3	505.0	2.7	8.3	137.5	20.1	13.7	42.9	90.7	29.0	142.3	730.0
1980	20.8	4.0	61.3	75.0	240.1	51.1	44.7	515.0	3.8	7.3	135.0	20.3	13.5	54.6	76.5	27.6	144.6	740.0
1981	20.8	4.0	58.5	75.0	250.4	46.3	61.0	530.0	3.2	6.0	150.0	19.6	13.5	40.1	106.9	21.4	126.7	785.0
1982	19.6	4.0	33.7	75.0	281.3	43.8	60.0	530.0	2.7	9.9	140.0	16.8	14.5	45.9	116.9	20.0	131.9	840.0
1983	18.5	4.0	11.3	75.0	256.1	26.9	36.6	590.0	4.2	6.9	137.5	9.5	14.5	60.6	90.8	17.8	95.4	845
1984[2]	15.3	6.0	9.6	75.0	246.9	32.2	39.6	560	1.8	7.4	187.5	9.0	14.5	47.4	81.0	16.8	80.8	880
1985[3]	12	6	12	85	214	37	25	510	3	9	160	9.0	19	53	74	16	96	875

[1] Exclusive of "Stock Afloat" and unreported gov't. stockpiles. [2] Preliminary. [3] Estimate. *Source: Rubber Study Group* (London) T.558

Net Exports of Natural Rubber from Producing Areas In Thousands of Metric Tons

Year	Burma	Kampuchea	Sri Lanka (Ceylon)	Indonesia	Malaysia (Peninsular)	Sabah	Sarawak	Thailand	Vietnam	Other Asia	Liberia	Nigeria	Other Africa	Papua New Guinea	World Total
1979		9.5	128.2	861.0	1,537	33.2	39.5	517.8	40.0	27.8	75.0	26.4	51.3	4.0	3,325
1980		—	120.9	976.1	1,416	30.9	35.2	456.8	30.0	30.5	76.5	14.6	59.2	4.0	3,265
1981		4.0	132.5	808.7	1,402	25.5	28.2	476.0	34.0	30.8	76.9	23.6	57.5	4.5	3,115
1982		7.5	131.3	801.4	1,317	21.7	15.9	546.7	30.0	24.2	67.5	26.8	57.8	2.3	3,075
1983[1]		10.0	125.2	938.0	1,498	21.5	18.9	552.5	34.0	19.0	65.0	28.8	62.0	2.7	3,355
1984[2]		11	125	1,000	1,400	23	18	550	35	18	68	28	62	3	3,400

[1] Preliminary. [2] Estimate. *Source: Rubber Study Group* (London) T.559

RUBBER

U.S. Imports of Natural Rubber (Includes Latex & Guayule) In Thousands of Long Tons

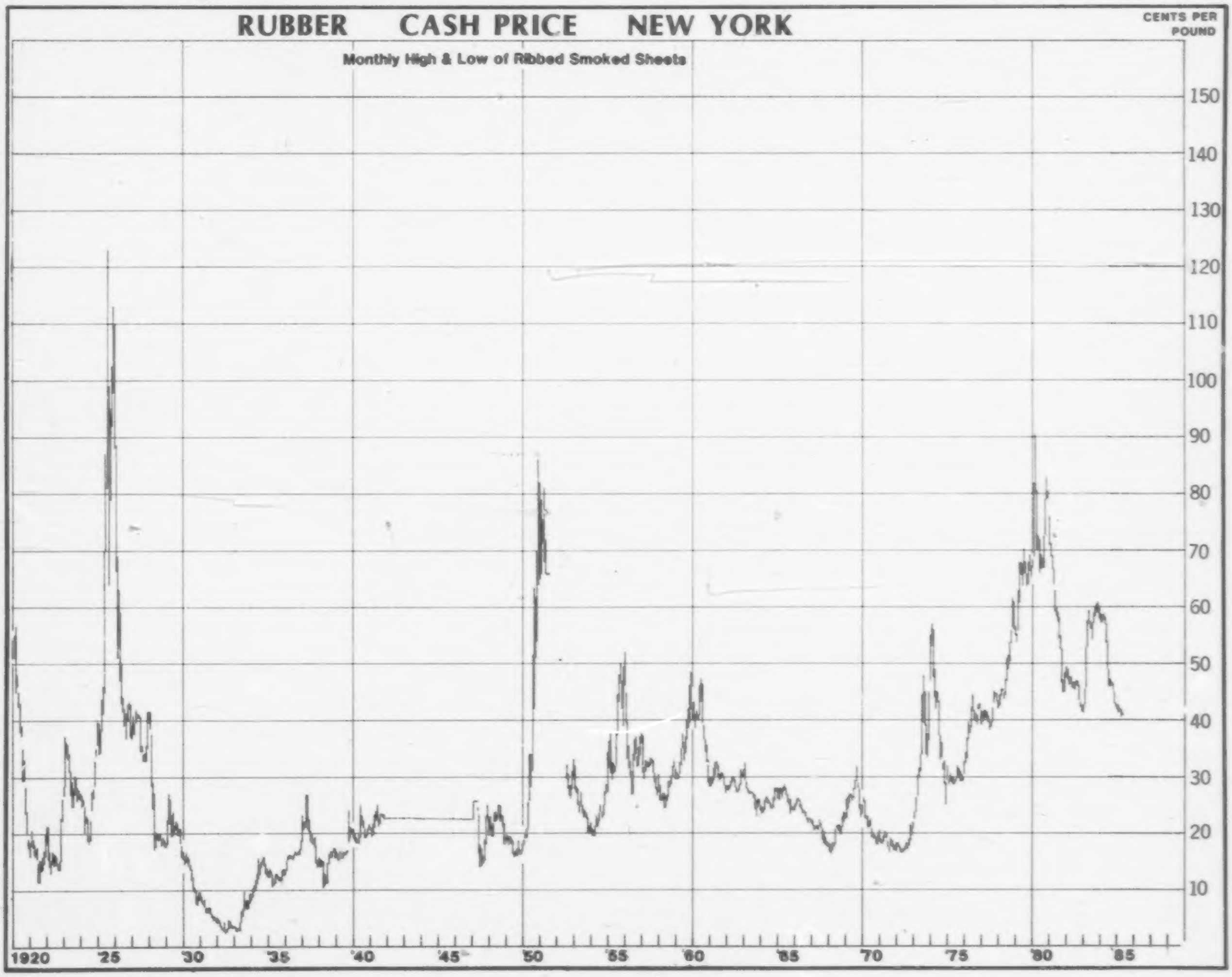
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1979	72.8	64.2	72.8	89.9	55.0	82.0	56.2	58.3	58.9	46.1	43.6	47.9	747.7
1980	76.8	56.0	74.0	38.9	55.3	44.5	38.5	31.4	55.9	31.8	50.3	45.1	598.3
1981	30.06	86.64	53.38	67.62	66.36	50.47	41.59	43.40	62.76	69.42	56.23	49.13	662.4
1982	50.99	59.33	45.71	53.86	56.19	63.39	38.67	54.35	40.60	54.36	51.37	49.45	618.3
1983[2]	33.01	49.63	48.54	62.11	63.44	65.20	50.41	31.90	44.22	67.83	71.06	54.71	642.1
1984[2]	87.84	57.82	75.45	69.18	70.25	41.45	73.81	56.23	67.46	61.95	62.36	62.21	786.0

[1] Includes latex and guayule. [2] Preliminary. *Source: Department of Commerce* T.560

Average Spot Crude Rubber Prices (Smoked Sheets[1]) in New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	54.4	57.0	61.5	67.4	75.4	68.8	63.8	65.5	64.0	68.5	67.0	67.9	65.1
1980	73.0	86.5	73.3	72.3	69.0	68.5	67.3	68.0	72.8	79.0	—	73.0	73.0
1981	71.3	69.0	65.0	59.0	58.0	57.0	56.0	54.0	50.4	—	45.6	48.3	57.6
1982	48.8	46.5	47.0	45.3	45.3	46.1	46.5	46.8	44.5	42.6	42.1	41.8	45.3
1983	44.0	48.5	57.8	57.8	56.8	54.5	58.3	59.3	60.5	60.5	58.3	—	56.0
1984	57.3	58.3	58.0	56.8	51.8	47.0	46.0	46.0	46.0	43.0	42.8	42.0	49.6
1985	42.3												

[1] No. 1, ribbed, plantation rubber. *Source: Bureau of Labor Statistics* (07-11-02.01) T.561



Consumption of Natural Rubber in the United States In Thousands of Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	61.2	53.9	52.9	56.3	58.5	58.4	49.4	54.8	61.3	62.0	47.9	53.4	669.97
1976	71.6	59.6	71.7	66.7	44.2	67.5	50.5	42.0	76.2	64.5	56.9	59.4	730.73
1977	70.2	66.8	74.5	68.5	66.8	68.2	50.4	62.8	64.6	63.6	61.3	62.5	780.13
1978	59.2	61.1	63.8	61.2	68.0	61.9	51.7	69.1	65.6	69.5	70.9	62.8	764.65
1979	68.3	66.6	74.5	61.8	60.2	59.0	57.9	63.2	57.7	65.2	55.6	47.9	739.00
1980	63.0	57.3	55.7	46.9	42.3	41.3	38.8	43.2	49.4	49.5	50.3	48.7	586.15
1981	49.0	52.6	55.4	55.1	53.9	59.5	56.4	51.1	52.1	57.3	49.7	42.6	634.67
1982	55.3	59.9	50.2	57.8	63.3	68.9	32.7	65.6	48.8	53.3	48.9	56.0	660.61
1983[1]	64.5	44.5	55.3	55.3	56.9	67.0	48.8	39.2	50.2	75.3	69.7	49.6	676.27
1984[1]	73.8	56.8	83.1	68.2	65.1	42.4	73.9	56.1	63.7	58.3	55.4	54.1	750.9

[1] Preliminary. *Source: Rubber Manufacturers' Association* T.562

Stocks of Natural Rubber in the United States, Beginning of Month In Thousands of Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1975	137.5	125.6	126.9	126.9	125.4	113.1	125.2	118.7	116.8	107.0	104.9	110.7
1976	105.4	99.8	158.2	127.0	140.9	104.7	102.3	106.8	92.6	104.9	64.5	71.9
1977	125.3	119.9	127.0	123.8	118.4	120.5	119.7	131.7	139.7	133.0	137.5	129.4
1978	127.6	123.3	116.4	117.1	115.6	122.8	123.4	125.4	126.1	127.7	133.5	124.0
1979	125.6	121.4	115.6	116.1	136.6	130.2	137.7	146.0	144.4	135.6	135.0	124.5
1980	132.1	131.4	135.3	141.4	152.4	145.7	147.4	149.9	138.5	132.9	129.5	123.1
1981	126.7	128.0	125.4	122.8	127.6	124.1	119.5	113.5	111.2	114.4	123.0	130.5
1982	142.4	127.1	126.5	121.3	116.6	110.8	105.4	110.2	97.7	89.0	90.2	95.4
1983[1]	95.4	91.8	95.0	87.4	93.8	100.0	97.9	99.2	90.7	83.3	74.8	75.9
1984[1]	80.8	95.2	87.7	87.8	87.8	91.4	88.5	87.0	84.8	86.2	87.3	91.3
1985[2]	96.4											

[1] Preliminary. *Source: Rubber Manufacturers' Association* T.563

Stocks of Synthetic Rubber in the United States, Beginning of Month In Thousands of Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1975	618.7	596.0	590.2	479.3	426.6	424.7	408.2	390.8	378.9	368.0	358.9	365.3
1976	369.9	405.1	406.4	386.7	416.4	453.9	472.7	499.1	513.6	475.5	464.7	449.0
1977	458.1	441.4	431.8	407.6	412.9	409.3	402.2	430.4	430.3	422.3	424.5	424.0
1978	426.8	441.0	427.9	434.5	446.9	441.4	433.1	456.5	445.1	435.8	425.3	419.9
1979	424.1	407.1	400.0	393.6	398.9	391.5	401.3	411.3	402.2	402.8	389.9	402.1
1980	402.9	439.9	436.2	427.6	452.2	445.1	429.2	391.2	372.3	339.7	325.4	328.9
1981	341.8	364.5	354.6	347.0	365.9	368.3	359.8	369.4	353.4	351.9	352.6	364.4
1982	349.0	333.3	336.8	349.2	358.3	364.4	352.9	342.8	326.6	304.3	318.8	294.6
1983[1]	255.9	281.0	284.8	283.5	283.8	294.3	290.8	304.8	276.2	262.3	256.1	282.7
1984[1]	277.9	284.1	277.2	277.0	294.6	305.0	302.3	309.3	300.6	312.0	301.4	285.9
1985[2]	274.1											

[1] Preliminary. *Source: Department of Commerce* T.564

Production of Synthetic Rubber in the United States In Thousands of Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	155.9	136.7	137.1	138.7	153.6	149.8	144.9	172.7	182.0	194.3	185.7	189.2	1,938
1976	191.5	193.1	210.5	204.2	191.4	176.3	156.7	160.7	192.7	209.5	206.3	210.9	2,304
1977	204.0	193.0	213.1	204.8	211.5	201.8	191.3	198.8	201.7	205.6	195.4	196.6	2,418
1978	198.2	193.8	210.3	214.9	211.2	194.4	195.9	205.7	207.4	212.3	212.1	219.1	2,475
1979	207.9	200.8	232.1	216.7	223.3	210.7	202.9	202.8	210.0	213.8	206.0	207.6	2,535
1980	195.6	194.7	206.8	192.4	159.6	129.6	110.3	123.7	149.8	174.6	178.5	193.7	2,015
1981	193.5	169.7	200.4	180.9	175.9	158.2	161.5	159.7	168.4	170.0	157.7	125.5	2,021
1982	155.6	162.3	187.9	171.7	171.1	156.8	139.7	145.5	147.9	154.4	122.4	116.5	1,829
1983[1]	155.2	153.9	170.1	160.5	171.1	164.5	154.6	150.5	163.2	178.0	193.7	160.2	1,978
1984[1]	183.3	173.0	190.3	193.2	191.4	183.7	166.7	178.4	173.0	179.7	158.3	147.5	2,119

[1] Preliminary. *Source: Department of Commerce* T.565

Consumption of Synthetic Rubber in the United States In Thousands of Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	178.4	162.4	143.3	167.5	165.7	170.1	154.3	171.5	183.2	201.2	157.7	167.0	2,022
1976	183.8	195.0	221.9	169.6	151.5	146.7	118.2	142.5	220.2	213.3	211.9	200.6	2,175
1977	217.6	203.6	232.6	203.1	218.8	208.6	161.1	209.8	209.0	205.7	190.9	203.4	2,464
1978	193.7	193.2	206.2	197.5	212.7	194.7	170.6	213.9	211.7	220.3	212.1	209.8	2,436
1979	226.0	201.4	224.4	201.5	212.0	179.6	176.5	202.3	187.9	202.8	174.5	163.3	2,341
1980	170.8	176.1	191.1	148.9	135.7	120.1	131.0	133.7	166.0	167.9	157.7	155.1	1,854
1981	153.0	166.7	194.0	144.9	167.1	154.1	144.7	165.0	163.5	163.8	141.1	131.9	1,890
1982	153.3	140.7	154.3	145.3	148.5	154.5	135.8	150.5	158.1	131.0	136.8	136.1	1,757
1983[1]	131.7	140.2	158.2	146.3	146.2	156.7	135.9	174.5	174.4	184.5	162.1	147.2	1,861
1984[1]	177.5	175.4	180.5	166.7	167.1	171.0	147.1	173.9	151.5	184.1	166.3	147.2	2,008

[1] Preliminary. *Source: Department of Commerce* T.566

Exports of Synthetic Rubber from the United States In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	14.52	17.05	15.06	17.17	15.69	16.78	16.24	18.36	19.28	20.64	21.15	22.57	214.50
1976	21.24	22.55	25.15	21.38	22.55	22.48	24.75	22.70	20.59	21.59	19.86	21.13	267.99
1977	19.11	20.97	24.34	21.48	22.06	20.78	24.72	14.86	26.15	14.59	13.80	17.13	239.98
1978	16.94	18.86	22.55	19.48	24.90	22.28	19.35	20.04	20.77	22.22	23.81	23.77	254.96
1979	23.62	22.29	27.74	29.43	28.74	34.61	34.51	39.37	34.90	38.61	36.53	34.76	385.11
1980	31.46	34.48	41.98	41.68	46.88	37.33	36.54	30.46	25.51	33.45	30.72	32.31	422.78
1981	31.21	31.65	38.73	31.77	32.00	28.55	26.27	21.97	24.40	23.94	22.49	21.65	334.63
1982	27.76	23.46	31.18	26.53	24.73	25.23	20.40	22.04	22.83	21.13	20.47	18.86	284.62
1983	20.24	18.61	24.44	24.91	31.66	24.37	20.15	21.08	22.01	20.14	23.75	23.67	275.01
1984	24.12	22.22	28.09	29.13	29.42	28.02	29.58	30.24	29.95	25.54	25.92	25.68	327.91

Source: Department of Commerce T.567

Production of Auto. Pneumatic Casings[2] & Motor Vehicle Registrations in the U.S. In Ths. of Casings

	Total Production of Tires													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Regis.[1] (Dec. 31)
1975	14,753	13,184	12,107	15,222	15,677	16,678	14,531	16,413	17,878	18,821	15,212	16,215	186,705	133.0
1976	17,598	18,200	20,552	16,085	9,856	10,453	8,025	8,954	18,096	21,113	18,827	20,194	187,953	138.5
1977	20,638	20,094	22,640	20,087	19,512	20,734	15,050	19,495	19,321	18,926	17,716	17,425	231,638	143.8
1978	18,290	18,319	18,987	18,828	19,148	18,946	15,108	19,245	19,155	20,497	18,299	18,869	223,406	148.8
1979	20,352	19,592	21,807	18,609	18,544	15,603	14,904	16,911	15,985	17,775	14,480	12,340	206,687	154.1
1980	15,188	15,059	15,082	13,678	11,370	10,716	10,206	12,057	13,911	15,790	12,861	13,346	159,263	155.9
1981	15,434	15,614	16,805	15,438	15,157	15,447	14,321	15,443	15,894	16,604	13,750	11,855	181,762	158.5
1982[3]	14,866	15,387	17,051	15,077	14,856	15,669	12,293	14,835	15,528	15,381	13,585	13,972	178,500	159.5
1983[3]	15,497	14,992	15,370	16,325	15,653	15,473	12,570	16,440	16,360	16,734	15,136	15,483	186,923	161.9
1984[3]	16,749	17,498	19,122	16,988	18,043	18,557	18,078	17,333	19,136	16,645				

[1] Registrations, in millions, of all privately & publicly owned vehicles (except military). [2] Passenger cars, buses, trucks & motorcycle tires. [3] Preliminary. *Sources: Rubber Manufacturers' Association; Motor Vehicle Mfg. Association* T.568

Stocks of Auto. Pneumatic Casings & Passenger[1] Car Registrations in the U.S. In Ths. of Casings

	Total Production of Tires												
Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Regis.[1] (Dec. 31)
1975	55,242	58,758	60,970	57,721	54,082	52,037	49,803	46,990	47,405	45,711	46,002	47,569	106.7
1976	50,020	53,172	55,395	54,837	49,125	40,259	32,405	25,581	21,285	24,594	27,581	30,200	110.2
1977	34,768	39,010	43,212	45,616	45,832	46,231	44,887	43,460	45,229	44,542	43,841	45,176	113.7
1978	47,181	51,523	54,621	51,986	50,006	49,277	46,293	44,280	44,057	41,796	40,135	40,394	116.6
1979	43,472	47,212	51,284	52,223	53,540	53,033	46,362	49,397	48,422	46,002	44,357	44,546	120.2
1980	44,873	46,760	49,993	50,471	49,220	46,972	42,817	40,079	37,057	33,730	32,112	32,363	121.7
1981	33,298	41,226	44,402	45,217	44,713	43,480	41,445	39,998	39,601	38,986	39,487	41,112	122.6
1982	40,863	42,904	46,254	47,817	46,583	45,337	43,475	40,763	40,192	38,685	38,116	38,436	122.8
1983[2]	39,955	43,839	45,483	50,287	51,921	42,395	39,622	36,989	35,541	32,854	31,530	31,676	124.4
1984[2]	33,340	35,450	37,615	38,529	38,026	37,693	37,678	37,199	37,685	37,277	37,995		

[1] Registrations, in millions, of privately and publicly owned passenger cars (except military). [2] Preliminary. *Sources: Rubber Manufacturers' Association; Motor Vehicle Mfg. Association* T.569

Rye

Rye production in 1984/85 was pegged at 32.4 million bushels by the USDA, and the highest level of production since 1971/72. Total supply increased to 41.5 million bushels in 1984/85, 16.9 percent higher than 1983/84 total supply of 34.5 million

Total domestic disappearance of rye in 1984/85 was pegged by the USDA at 28 million bushels, compared with 25.4 million in 1983/84. Feed and residual use were put at 18 million bushels, up from 15 million in 1983/84. Food use of rye was expected to remain the same as the previous year at 3.5 million bushels. Seed and industrial use were expected to be slightly lower in 1984/85, declining to 4.5 million bushels from 4.8 million in 1983/84. U.S. exports were projected to remain the same as the previous year at 1 million bushels. The USDA projected ending stocks for 1984/85 at 12.5 million bushels, a gain of 35.2 percent from 8.1 million a year earlier.

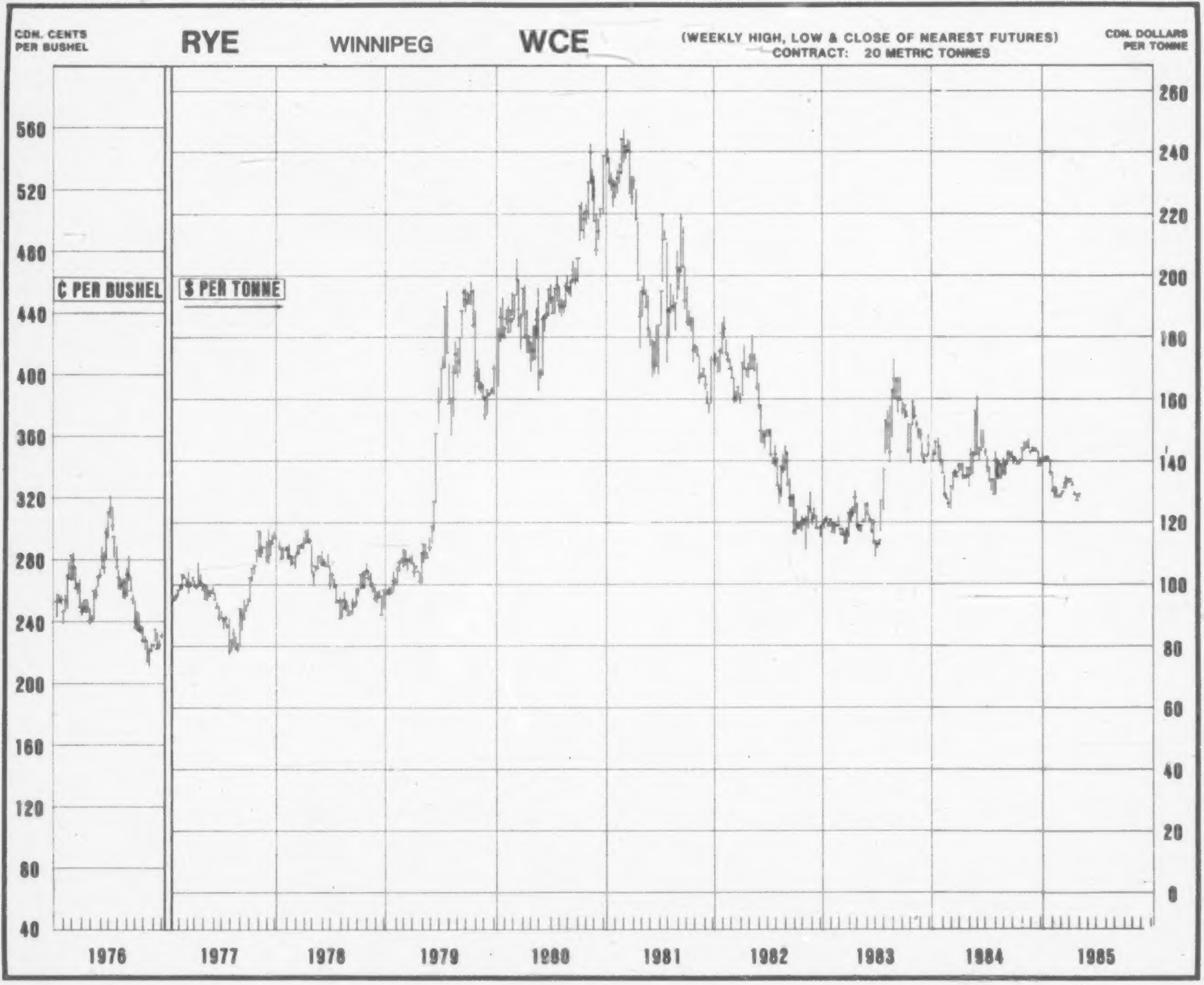
U.S. rye seeding in the fall of 1984 for harvest in 1985 declined to 2.555 million acres from 2.971 seeded the previous year, according to the December 20, 1984, USDA report on 1985/86 crop winter wheat and rye seedings.

U.S. Government Price Support

The 1985 crop national average loan rate for rye is $2.17 per bushel, the same level as last year. There is no target price for rye.

Futures Market

Rye futures are traded on the Winnipeg Commodity Exchange.



RYE

World Production of Rye In Thousands of Metric Tons

Crop Year	Argentina	Austria	Canada	Czechoslovakia	Denmark	France	Germany West	Germany East	Hungary	Netherlands	Poland	Spain	Turkey	USSR	United States	World Total
1980–1	155	383	448	575	199	405	2,184	1,917	139	39	6,566	284	525	10,205	419	25,268
1981–2	149	320	927	544	208	342	1,793	1,797	115	29	6,731	212	520	9,500	478	24,375
1982–3[1]	244	348	888	600	226	330	1,703	2,117	120	26	7,812	170	500	14,000	496	30,289
1983–4[2]															689	
1984–5[2]															823	

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.570

Salient Statistics of Rye in the United States

Year Begin. June 1	Supply: Stocks, June 1: Privately Owned[2]	Supply: Stocks, June 1: Gov't.[3]	Supply: Total Stocks	Supply: Production	Supply: Imports	Supply: Total Supply	Disappearance: Domestic Use: Food	Disappearance: Domestic Use: Alc. Beverages	Disappearance: Domestic Use: Seed	Disappearance: Domestic Use: Feed[5]	Disappearance: Domestic Use: Total	Disappearance: Exports	Disappearance: Total Disappearance	Acreage: Planted	Acreage: Harvested for Grain	Yield Per Harvested Acre
	Thousands of Bushels													Mil. Acres		Bushels
1980–1	12,000	192	11,970	15,958	10	28,685	3,515	2,050	4,150	6,600	16,400	7,494	23,900	2,488	650	24.6
1981–2	4,000	145	4,030	18,187	432	23,399	3,458	2,242	4,160	8,200	18,100	1,529	19,600	2,566	685	26.6
1982–3[1]			3,012	19,533	3,043	26,955	3,315	2,256	4,240	9,600	19,600	194	19,800	2,533	677	28.9
1983–4[4]			5,822	27,116	1,600	35,100	3,500	2,100	4,800	15,000	25,400	1,000	26,400	2,707	896	30.3
1984–5[4]			8,100	32,392	1,000	41,500	3,500	2,000	4,500	18,000	28,000	1,000	29,000	2,971	981	33.0

[1] Preliminary. [2] Includes total loans. [3] Uncommitted, gov't only. [4] Forecast. [5] Residual; approximates total feed use. *Source: Economics Service, U.S.D.A.* T.571

Production of Rye in the United States In Thousands of Bushels

Year	Illinois	Indiana	Kansas	Michigan	Minnesota	Georgia	Nebraska	No. Dakota	Ohio	Oklahoma	Oregon	So. Dakota	Virginia	Texas	Wisconsin	So. Carolina
1979	391	208	504	625	2,275	2,310	770	4,200	155	910	144	5,700	384	513	368	609
1980	368	182	210	504	1,900	1,995	666	1,470	231	816	150	4,030	325	494	368	616
1981	336	234	252	532	2,883	2,730	924	2,560	150	680	150	3,220	364	475	408	726
1982	299	260	240	522	3,300	1,470	1,269	2,400	155	736	116	4,680	364	504	300	621
1983	336	270	220	600	4,960	1,470	1,265	4,320	210	780	100	8,740	312	450	300	320
1984[1]	308	336	312	588	6,650	1,760	1,334	5,400	175	704	140	10,800	378	240	216	546

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.572

Month End Open Interest of Rye Futures in Winnipeg In 20 Tonne Units

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1980	4,648	5,028	5,379	6,172	3,313	5,229	5,348	4,839	5,814	6,106	4,250	3,428
1981	3,876	4,811	3,704	3,640	2,948	3,368	5,028	6,440	5,251	2,516	4,404	3,828
1982	3,739	3,622	3,219	3,583	4,426	3,008	2,268	4,286	5,250	4,052	3,773	3,244
1983	3,227	3,628	3,097	4,625	4,834	4,935	7,883	7,915	3,665	4,494	3,110	3,054
1984	2,224	4,566	3,980	3,883	3,731	3,023	2,888	5,430	7,098	6,320	5,894	4,158
1985	4,267	4,826	4,175									

Source: Winnipeg Commodity Exchange T.577

U.S. Rye Crop Production Reports and CCC Operations In Thousands of Bushels

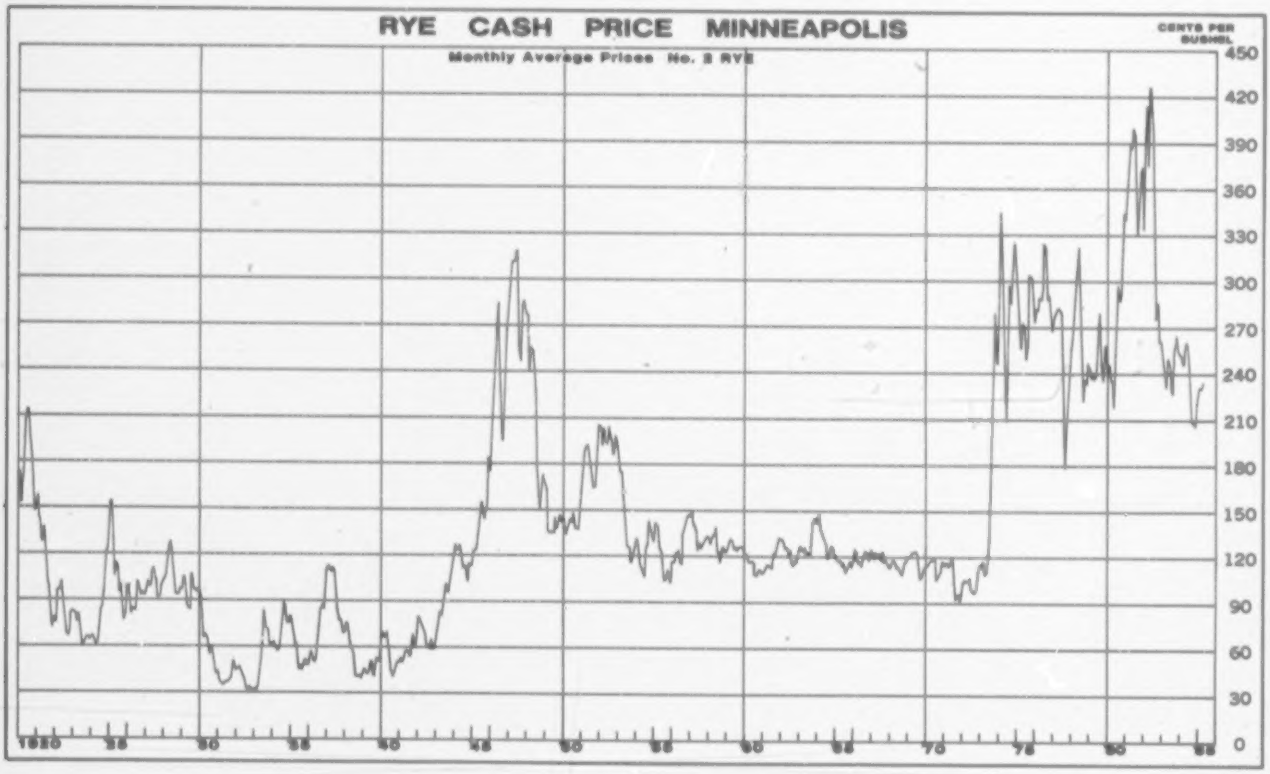
Year Begin. June 1	Official Crop Reports July 1	Aug. 1	Dec. 1	Final	National Average Support Rate $ Per Bushel	% of Parity	Placed Under Loan	Direct Purchases	Total	Delivered to CCC	Total Stocks Ending May 31 Ending Carryover[1]	CCC Uncommitted	Privately Owned[3] Under Loan[4]	Other
1977–8	17,787	18,242	16,998	16,543	1.70	61		—	900	—	4,418		—	
1978–9	28,518	28,567	26,160	24,065	1.70	56		—	3,000	—	4,137		—	
1979–0	23,638	23,736	24,549	21,887	1.79	49			2,000	—	8,973		—	
1980–1	15,784	16,189	16,265	15,958	1.91	51			450	—	11,970		—	
1981–2	16,743	17,083	18,621	18,187	2.04	48			500	—	4,030			
1982–3[2]	20,119	19,924	20,817	19,533	2.17	48			1,600	—	3,012			
1983–4[2]	26,058	25,698	28,152	27,116	2.25						5,822			
1984–5[2]	29,903	30,184	32,392	32,392	2.17						8,100			

[1] Old-crop rye under loan at end of crop year. [2] Preliminary. [3] Derived by subtracting CCC stocks & loans outstanding from ending carryover. [4] Includes previous crops under reseal. *Source: Economic Research Service, U.S.D.A.* T.573

Rye Under Price Support Through the End of the Month (Cumulative Total from Current Season's Crop) In Thousands of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1979–0	5	338	765	1,106	1,313	1,397	1,592	1,653	1,790	1,882	1,900	1,905	1,905
1980–1	—	97	240	297	348	384	396	399	402	406	406	406	
1981–2	36	264	359	398	424	439	448	456	456	456	456	456	
1982–3	7	344	771	1,008	1,096	1,193	1,324	1,369	1,588	1,709	1,711	1,712	
1983–4	83	1,819	2,228	3,533	3,885	4,199	4,577	4,862	5,141	5,228	5,254	5,256	
1984–5	68	3,581	6,661	8,224	8,653	8,911	9,655	9,830					

Source: U.S. Department of Agriculture T.578



RYE

Average Price of Cash Rye No. 2 at Minneapolis In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1979–0	279	247	235	257	249	235	245	235	235	218	244	266	247
1980–1	297	287	292	307	344	340	352	363	389	387	396	394	346
1981–2	352	330	356	371	374	334	394	414	375	426	410	397	378
1982–3	342	276	286	260	261	256	251	246	231	250	244	232	261
1983–4	227	256	265	256	254	252	251	245	250	260	258	244	252
1984–5	227	209	207	206	221	227	231	230					

Source: Economic Research Service, U.S.D.A. T.575

High, Low & Closing Prices of May Rye Futures in Winnipeg In Canadian Dollars per Tonne

Year of Delivery		Year Prior to Delivery							Delivery Year					Life of Delivery Range
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1980	High	154.00	188.00	167.50	189.40	191.00	181.00	175.00	192.50	195.00	205.50	196.50	195.50	205.50
	Low	117.50	148.50	139.50	159.40	171.50	170.50	160.80	163.50	182.00	176.00	173.80	168.50	117.50
	Close	143.50	158.00	159.40	184.00	181.50	172.10	169.40	183.00	186.00	187.60	178.50	195.50	—
1981	High	193.50	205.90	194.50	205.70	231.00	250.50	244.00	242.00	244.50	242.50	232.50	199.50	250.50
	Low	170.50	189.00	182.10	192.00	201.80	228.00	216.50	223.00	225.50	223.40	176.00	186.70	170.50
	Close	192.90	194.00	194.20	203.00	230.00	242.80	237.00	225.50	244.50	230.20	189.50	194.00	—
1982	High	167.00	181.50	215.90	233.50	218.00	195.60	187.00	185.20	187.30	171.00	178.00	180.90	233.50
	Low	151.20	154.90	183.50	211.20	193.00	181.50	169.80	168.70	169.50	158.50	160.00	163.40	151.20
	Close	151.20	181.50	215.90	217.70	194.20	183.40	171.00	182.00	169.50	160.30	170.00	165.50	—
1983	High	162.00	162.00	152.50	150.50	139.50	140.20	133.00	126.30	123.20	123.00	130.00	126.00	162.00
	Low	162.00	152.00	138.00	133.80	128.00	129.00	121.00	119.80	116.40	115.30	118.10	116.50	115.30
	Close	162.00	152.50	145.00	133.80	128.20	130.20	121.00	123.10	120.50	122.70	118.70	122.50	—
1984	High	—	—	174.00	176.00	173.30	165.80	158.30	150.00	141.00	140.00	139.20	157.00	176.00
	Low	—	—	154.40	169.50	154.40	156.60	146.00	140.70	125.10	129.20	134.00	131.50	125.10
	Close	—	—	170.10	170.50	162.50	157.70	148.90	141.00	129.30	138.20	135.50	151.50	—
1985	High	—	—	156.00	158.70	156.90	157.20	154.80	145.40	142.30	134.60			
	Low	—	—	152.20	152.90	152.20	153.00	145.20	143.00	132.00	132.30			
	Close	—	—	153.00	157.70	152.70	154.10	145.20	143.00	132.60	133.70			

Source: Winnipeg Commodity Exchange T.576

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Salt

World mine production of salt in 1984 was nearly 4 percent above 1983 output, according to U.S. Bureau of Mines data. There are no economic substitutes for salt. Calcium chloride, hydrochloric acid, and potassium chloride can be substituted in deicing, certain chemical processes, or food flavoring, but at higher cost.

U.S. production of salt in 1984 was estimated to be about 17 percent above 1983 output. Increased requirements for salt by the chemical industry brought about an estimated 7 percent increase in domestic demand in 1984. The chemical industry uses about 55 percent of the salt sold or used by producers. Salt used for highway deicing accounted for about 20 percent of domestic salt demand in 1984. A bill to reduce the use of deicing salt was passed by the Wisconsin State Senate. And, the Salt Institute conducted over 100 "Sensible Salt Seminars" for U.S. and Canadian snow and ice control personnel in 1984.

From a 1980 base, demand for salt is estimated by the Bureau of Mines to increase at an average annual rate of about 1.5 percent through 1990. It is estimated that in 1985 domestic mine production of salt will be about 38 million tons and U.S. apparent consumption 44 million.

Based on final 1983 data, the estimated percentage of salt sold or used by type in the U.S. in 1984 was: salt in brine—52 percent; rock salt—34 percent; vacuum and open-pan salt—9 percent; and solar evaporated salt—5 percent.

World Production of All Salt In Thousands of Short Tons

Year	Brazil	Canada	China	France	W. Germany	India	Italy	Japan	Netherlands	Poland	Spain	United Kingdom	United States	USSR	World Total
1977	3,058	6,657	18,850	6,367	13,583	5,877	5,092	1,164	3,429	4,803	3,428	9,041	43,439	15,760	173,107
1978	3,637	7,112	21,528	6,926	13,953	7,385	5,436	1,183	3,240	4,843	3,714	8,058	42,896	15,983	185,462
1979	3,918	7,585	16,281	8,882	16,634	7,756	6,249	1,189	4,355	4,882	3,801	8,620	45,820	15,763	191,107
1980	4,231	7,748	19,048	7,831	12,562	8,828	5,806	1,226	3,818	4,997	3,868	7,887	40,378	16,094	186,180
1981	3,974	7,981	20,194	7,315	13,824	9,845	5,039	1,213	3,944	4,708	4,072	7,408	38,915	16,755	188,926
1982[1]	4,105	8,752	18,060	7,380	12,102	8,061	5,074	1,124	3,517	4,700	3,626	8,418	37,910	17,416	181,951
1983[2]	4,240	9,500	17,500	7,910	11,500	11,004	5,200	1,300	3,400	4,700	3,700	8,500	34,605	17,900	182,752
1984[2]		9,500	18,000	7,500	11,500	11,000	5,000			5,000		8,500	37,750	18,000	189,850

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.581

Salient Statistics of the Salt Industry in the United States In Thousands of Short Tons

Year	Net Import Reliance as a % of Apparent Consumption	Avg. Value F.O.B. Mine Vacuum & Open Pan $ Ton	Sold or Used by Producers: Evaporated (Mfg.): Bulk: Open & Vacuum Pans	Sold or Used by Producers: Evaporated (Mfg.): Bulk: Solar	Sold or Used by Producers: Evaporated (Mfg.): Pressed Blocks	Sold or Used by Producers: Total Evaporated	Sold or Used by Producers: Rock Salt: Bulk	Sold or Used by Producers: Rock Salt: Pressed Block	Sold or Used by Producers: Rock Salt: Total Salt Rock	Sold or Used by Producers: Salt in Brine	Sold or Used by Producers: Total Salt	Sold or Used by Producers: Value[3] Million $	Imports for Consumption	Exports: Total	Exports: To Canada	Apparent Consumption
1977	8	52.01	3,481	1,808	388	5,677	14,893	65	14,958	22,777	43,412	451.6	4,529	1,008	963	46,933
1978	10	58.86	3,463	2,001	381	5,845	14,630	58	14,688	22,336	42,869	499.3	5,380	776	750	47,473
1979	10	61.64	3,726	2,104	391	6,221	14,827	64	14,891	24,681	45,793	538.4	5,275	697	681	50,371
1980	7	76.44	3,587	2,334	393	6,314	11,742	65	11,806	22,231	40,352	656.2	5,263	831	800	44,784
1981	8	79.68	3,500	2,298	404	6,201	11,809	62	11,871	20,835	38,907	637.6	4,319	1,046	1,011	42,180
1982	11	86.63	3,379	2,478	447	6,305	13,431	72	13,503	18,086	37,894	671.4	5,451	1,001	957	42,344
1983[1]	18	89.39	3,309	1,962	408	5,680	9,867	73	9,941	18,952	34,573	597.1	5,997	517	475	40,053
1984[2]	10	90.00									37,750		6,000	750		43,000

[1] Preliminary. [2] Estimate. [3] Values are f.o.b. mine or refinery & do not include cost of cooperage or containers. [4] Or Grainers. *Source: Bureau of Mines* T.582

Salt Sold or Used by Producers in the U.S. by Classes & Consumers or Uses In Thousands of Short Tons

Year	Chlorine, Caustic Soda Ash	Flour Processors	Textile & Dyeing	Meat Packers, Tanners, Etc.[2]	Canning	Baking	U.S. Govt.	Feed Dealers	Feed Mixers	Rubber	Oil	Paper & Pulp	Metals	Water Softener Mfg.[3]	Grocery Stores	Flour Proc.	Highway Use
1977	24,142	95	196	569	255	112	72	1,269	556	125	361	222	351	650	1,043	95	8,678
1978	23,735	91	182	540	254	111	86	1,197	654	96	451	221	346	764	1,057	91	8,487
1979	26,200	95	188	546	280	119	78	1,194	723	99	550	194	356	810	1,140	95	8,742
1980	23,941	92	177	546	287	113	121	1,172	662	95	709	230	272	686	995	92	6,389
1981	22,241	82	180	491	230	109	126	1,147	646	113	820	246	299	700	1,021	82	6,725
1982	18,861	83	165	550	204	109	152	967	699	51	1,035	209	294	718	1,053	83	9,053
1983[1]	19,950	86	171	531	211	114	563	977	628	45	918	274	242	707	987	86	5,041

[1] Preliminary. [2] Also casing mfg. [3] Also service companies. *Source: Bureau of Mines* T.583

Sheep & Lambs

Preliminary figures released by the USDA indicated that beginning sheep numbers, on a worldwide basis, for 1985 could amount to 675.0 million head in 29 selected countries compared with 668.0 million in 1984 and 658.1 million in 1983. Beginning sheep numbers in the Soviet Union in 1985 could total 145.0 million head, down slightly from 145.3 million a year earlier. Australia's beginning sheep numbers in 1985 were expected to total 146.0 million head compared with 138.6 million in the preceding year, and beginning sheep numbers in New Zealand were put at 71.1 million vs. 70.3 million in 1983. The expected sharp increase in Australian beginning sheep numbers was attributed to improved weather conditions. Australia's larger herd could lead to an increase in slaughter and in meat production in 1985. Similarly increased sheep numbers in the Soviet Union influenced a rise in that country's meat production for 1984.

After rising for four years, U.S. commercial lamb and mutton production for all of 1984 was estimated to have leveled off. Extreme drought conditions in producing regions of Texas in the past two years caused lack of forage and severe liquidations of breeding herds. Lamb and mutton production in 1984 was estimated at 366 million pounds compared with 367 million pounds in 1983. The 1985 production is expected to amount to 320 million pounds, 12 percent below 1984 despite an improvement in forage conditions in the fall of 1984. The drop in projected 1985 meat production was attributed to continuing herd liquidation and the retention of ewe lambs.

Commercial lamb and sheep slaughter for all of 1984 was estimated at 6.65 million head, 1 percent above 1983. Poor forage conditions were expected to cause the 1984 lambing rate (lambs per 100 ewes 1 year and older) to be below the 1983 rate of 99.

World Sheep Numbers in Specified Countries   In Millions of Head

Year	India	Argentina	Australia	Brazil	Peru	Iran	New Zealand	Spain[2]	Turkey	United Kingdom	United States	South Africa	Uruguay	USSR	China[4]	World
1979	41.0	32.8	134.2	17.8	14.0	32.5	63.5	13.8	43.9	21.7	12.4	32.5	20.7	142.6		708
1980	40.5	32.0	136.0	18.0	13.5	32.0	63.5	16.1	46.0	21.7	12.7	34.9	23.3	143.6		653
1981	40.7	30.0	134.4	18.0	13.5		68.8	16.5	48.6	21.6	12.9	33.8	24.1	141.6	187.0	657
1982[1]	40.8	29.0	138.0	18.0	13.0		69.9	17.1	49.6	22.2	13.0	34.2	23.4	142.4		665
1983[3]	40.8	28.0	133.2				70.3	15.0	50.3	22.9	12.1	33.2	23.6	142.2		664
1984[3]	40.9	28.0	138.6				70.3	15.0	50.5	23.2	11.5	31.9	23.6	145.3		675
1985[3]			144.0				70.3				10.4			142.4		675

[1] Preliminary. [2] One year old & older. [3] Estimate. [4] Mainland. *Source: Foreign Agricultural Service, U.S.D.A.* T.584

Salient Statistics of Sheep & Lambs in the United States

Year	On Hand Jan. 1	Lambs Saved	In Shipments	Marketings[2]	Slaughter		Production	Marketings[2]	Value of Production	Cash Receipts[3]	Value of Home Consumption	Gross Income	Farm Value (1/1)	
	— Mil. Head —		——— Ths. Head ———		Farm	Total[4]	—— Mil. Lbs. ——		——— Millions of Dollars ———				All	$ per Head
1979	12.4	8.0	2,136	7,678	172	5,189	709	812	410.1	474.2	11.7	485.9	891.0	72.10
1980	12.7	8.3	2,216	8,112	165	5,742	744	852	401.5	469.7	11.6	481.3	992.1	78.20
1981	12.9	8.8	1,862	8,597	189	6,197	770	884	358.5	415.7	12.4	428.1	903.3	69.80
1982	13.0	8.6	2,120	9,589	194	6,499	774	1,033	351.2	447.4	13.0	460.3	739.6	57.00
1983[1]	12.1	8.2				6,619							628.6	51.80
1984[1]	11.5					6,758							598.9	52.10
1985[1]	10.4												637.9	61.10

[1] Preliminary. [2] Excludes interfarm sales. [3] Includes receipts from marketings & from sales of farm slaughter meats. [4] Includes all commercial & farm. *Source: Crop Reporting Board, U.S.D.A.* T.585

Sheep and Lambs on Farms in the United States, January 1   In Thousands of Head

	All Sheep and Lambs[2]														
Year	Minnesota	California	Colorado	Idaho	Missouri	Montana	New Mexico	Ohio	South Dakota	Texas	Utah	Wyoming	Iowa	Total[2]	Total[1] Stock
1978	255	1,115	810	536	131	530	571	370	704	2,460	491	1,115	370	12,348	10,725
1979	255	1,150	795	466	126	475	604	350	740	2,415	486	1,080	380	12,365	10,786
1980	264	1,175	870	468	123	574	660	320	783	2,400	625	1,050	408	12,687	11,065
1981	295	1,205	810	512	138	595	650	310	780	2,360	650	1,110	437	12,936	11,287
1982	335	1,210	710	498	133	616	615	313	750	2,400	636	1,130	485	12,966	11,402
1983[3]	300	1,115	750	429	126	560	610	295	680	2,225	590	1,060	457	12,140	10,385
1984[3]	255	1,115	690	383	128	564	589	265	740	1,970	568	1,090	425	11,487	9,769
1985[3]	255	1,065	690	313	123	515	538	265	639	1,810	515	860	360	10,443	8,847

[1] Stock sheep & lambs; does not include sheep & lambs on feed for market. [2] Includes sheep & lambs on feed for market and stock sheep & lambs. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.586

Average Wholesale Price of Lambs at Omaha In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	73.75	71.25	61.25	70.50	70.75	65.00	61.52	60.62	67.00	64.50	65.00	67.75	66.58
1980	64.60	62.71	64.64	56.12	67.62	65.78	66.99	66.98	64.88	61.77	55.67	53.13	59.81
1981	50.00	53.50	55.25	59.25	65.00	66.42	47.33	54.10	48.53	49.86	45.27	45.10	52.23
1982[1]	[illegible].75	51.50	59.00	59.50	66.25	60.50	57.25	50.50	50.00	48.25	46.75	48.50	53.03
1983[1]	53.50	58.50	59.75	58.75	59.00	53.00	51.12	49.25	48.50	51.75	56.00	57.75	54.74
1984[1]	60.50	58.75	58.75	60.50	62.25	61.75	61.50	62.76	63.58	63.35	62.98	60.08	61.40

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.587

Federally Inspected Slaughter of Sheep & Lambs in the United States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	425	390	487	430	451	441	406	438	435	457	413	396	5,169
1979	391	354	431	425	421	371	384	415	410	455	386	389	4,833
1980	448	419	470	466	454	400	420	427	466	510	415	468	5,363
1981	488	426	488	512	426	440	439	467	546	558	476	522	5,789
1982	510	490	570	1,493			1,577			1,634			6,273
1983	509	457	617	508	508	508	497	585	595	580	510	536	6,412
1984	540	548	586	592	558	500	511	561	528	588	524	514	6,550
1985	544												

Source: Economic Research Service, U.S.D.A. T.588

Cold Storage Holdings of Lamb and Mutton, on 1st of Month In Thousands of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	10,096	9,261	8,628	7,947	9,176	10,149	10,011	11,891	11,259	11,323	12,200	11,804
1979	11,716	10,965	10,827	12,022	12,072	12,897	11,483	11,943	11,763	10,951	11,697	11,071
1980	10,751	10,302	9,464	7,945	8,475	8,995	10,229	10,263	8,880	8,336	8,165	9,779
1981	9,142	8,997	7,843	7,823	10,196	10,403	12,297	12,564	13,694	13,311	12,676	11,362
1982	10,540	9,569	8,449	8,783	—	—	8,266	—	—	8,571	—	—
1983	8,653	7,682	7,673	8,218	8,331	8,839	8,691	7,717	8,815	8,622	9,092	10,270
1984[1]	10,701	8,312	7,542	8,057	9,123	8,839	8,678	8,404	8,026	7,267	8,403	7,890
1985[1]	7,066	7,390										

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.589

Average Price Received by Farmers for Sheep in the U.S. In Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1978	16.50	18.40	19.70	19.50	19.20	19.30	19.40	20.80	24.40	24.90	24.70	25.50	21.80
1979	26.20	26.30	28.10	31.00	27.90	24.00	25.10	24.30	26.50	27.20	26.30	25.00	26.30
1980	27.40	30.50	26.90	21.90	21.70	20.30	17.80	19.40	21.40	18.90	19.90	20.80	21.10
1981	27.40	29.00	26.10	23.40	19.50	20.30	23.00	20.40	20.30	19.70	19.10	19.20	21.20
1982	25.10	21.30	27.20	22.20	21.00	22.00	21.00	18.60	16.50	15.20	15.30	16.80	19.50
1983	21.30	21.90	20.80	17.40	15.20	14.50	16.20	15.50	12.80	13.80	15.10	17.00	15.70
1984[2]	18.20	19.80	18.70	16.30	13.00	13.80	16.80	17.30	15.90	15.20	18.10	24.30	16.40
1985[2]	26.50	24.10											

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.590

Average Price Received by Farmers for Lambs in the U.S. In Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1978	60.70	63.20	67.10	63.90	66.50	61.80	58.80	58.50	63.70	62.50	61.40	65.70	62.80
1979	74.10	69.90	64.90	70.40	69.70	66.40	64.00	61.40	66.70	65.70	64.90	66.90	66.70
1980	66.40	64.40	67.10	59.20	60.30	64.60	65.30	65.80	66.70	64.30	59.90	58.40	63.60
1981	54.10	55.40	56.50	58.80	63.10	65.00	59.50	56.20	50.40	50.60	47.40	47.50	54.90
1982	50.40	53.30	60.30	61.50	63.50	57.80	56.30	52.90	50.90	49.10	47.70	50.90	53.10
1983	55.50	60.50	63.20	61.50	59.60	54.20	49.80	48.30	47.50	50.90	55.80	58.90	53.90
1984[2]	60.00	59.20	58.20	60.60	59.50	57.50	58.60	61.00	61.80	62.40	63.30	61.90	48.50
1985[2]	63.40	64.70											

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.591

Silk

Salient Statistics of Silk in the United States

Year	World Production (Raw) Million Lbs.	U.S. Unmanufactured[1] Imports[2] (By Country of Origin) Total Imports	Brazil	United Kingdom	Hong Kong	India	Italy	Japan	Switzerland	China	Korea	U.S. Silk Imports[2] Raw	U.S. Silk Imports[2] Waste	Mill Consumption Total Mil. Pounds	Mill Consumption Per Capita Pounds
		Thousands of Pounds										—Mil. Lbs.—			
1971	90	1,702	38	—	—	—	345	1,154	—	—	74	.3	1.4	1.7	.10
1972	93	2,139	76	—	—	—	227	1,339	—	—	106	.6	1.6	2.1	—
1973	95	3,342	79	13	—	—	472	2,197	—	—	15	.6	2.8	3.3	—
1974	99	2,593	145	0	—	—	397	1,476	—	—	107	.4	2.2	2.6	—
1975	104	968	176	1	—	—	0	386	—	353	0	.6	.4	1.0	—
1976	106	2,653	247	1	—	—	98	1,727	—	457	—	.7	1.9	2.8	—
1977	108	1,621	106	0	—	—	0	1,230	—	268	0	.4	1.2	1.6	—
1978	112	1,989	182	0	—	107	1	918	—	607	119	.7	1.3	2.0	—
1979	121	1,565	193	—	—	—	—	602	—	747	—	.8	.8	1.5	—
1980	123	1,053	139	—	5	—	—	108	—	713	71	.5	.6	1.5	—
1981	126	1,983	176	—	29	—	223	175	—	1,280	0	.8	1.2	2.0	—
1982[3]	121	4,219	224	—	94	—	223	256	—	3,311	0	1.4	2.8	2.0	—
1983[4]	121													2.0	—
1984[4]														3.0	

[1] In skeins, wild or tussah, cocoons, and waste. [2] Imports for consumption. [3] Preliminary. [4] Estimate. *Sources: Department of Commerce; Textile Organon*

T.592

Raw Silk Deliveries in the U.S. In Bales (132 Lbs.—60 Kilos)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	247	205	187	277	228	129	192	241	247	355	165	253	2,726
1972	233	184	308	198	141	195	182	445	529	209	229	313	3,166
1973[1]	556	355	450	499	393	119	577	214	71	93	105	246	3,678
1974	124	305	233	277	175	288	269	139	97	302	151	96	2,456
1975	190	188	410	393	394	219	380	219	505	585	225	641	4,349
1976	925	469	689	362	251	579	337	358	422	268	222	159	5,041
1977	352	239	242	212	254	259	322	311	370	424	322	433	3,740
1978	321	394	424	382	397	299	316	341	401	280	468	214	4,237
1979	501	302	687	353	471	418	407	756	492	490	368	518	5,763
1980	312	644	422	507	366	285	257	332	342	365	265	323	4,420
1981	471	380	471	446	322	529	300	259	348	414	487	611	5,038
1982	450	489	662	398	234	369	495	403	364	226	514	317	4,921
1983	280	506	390	462	717	377	264	474	534	529	587	324	5,444
1984	715	537	455	315	636	655	229	672	532	562	391	538	6,237
1985	462	1,151											

[1] Includes re-exports from 1973. *Source: International Silk Association*

T.593

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Silver

World mine production of silver in 1984 was estimated by the U.S. Bureau of Mines at 400.0 million troy ounces, about 2 percent above total 1983 world output. Amongst market economy countries, the largest producer was Mexico with a 1984 production level of 62.0 million ounces, about 0.6 million over the 1983 level. Mexico was followed by Peru, which produced an estimated 58.0 million ounces, nearly 4 percent above its 1983 production. Estimated mine production of silver in countries with centrally planned economies totaled 81.0 million troy ounces, nearly equal to the 1983 level. Nearly 60 percent of the silver mined in centrally planned economies in 1984 was accounted for by production from the Soviet Union.

Total U.S. consumption of silver in 1984 was estimated at 117.4 million troy ounces in 1984, down just fractionally from 1983 total consumption of 118.4 million ounces. Total net industrial consumption was 114.8 million ounces in 1984 compared with 116.3 million a year earlier. U.S. coinage of silver in 1984 totaled 2.7 million ounces compared with 2.1 million in 1983.

A total of 55.3 million ounces of silver, or nearly one half of net industrial consumption, during 1984 was attributed to usage in photographic materials. The next largest category of domestic end use of silver in 1984 was in electrical and electronic contacts and conductors, which totaled 25.6 million ounces, or just over 20 percent of total net industrial consumption.

U.S. production of silver increased slightly in 1984 over that of 1983 despite generally lower silver and other base metal prices, and a nearly stagnant industrial demand for silver. Increased productivity, production from new mines, and a shifting of emphasis at some operations to precious metals recovery were among the factors that contributed to the increased production. The amount of silver supplied to the U.S. market in 1984 from domestic primary and secondary sources and imports exceeded U.S. industrial demand. The oversupply of silver to the domestic market was expected to continue in 1985 because of the need by some developing countries to continue to export silver to earn foreign exchange. Since 1980, when silver prices peaked, U.S. industrial consumption had stagnated at about 120 million ounces per year, owing partly to more efficient use of silver in response to high prices.

Approximately 23 million ounces of silver were recovered from old scrap in 1984 in the U.S., equivalent to 19 percent of reported consumption. Another 38 million ounces were recovered from new scrap. It was estimated that, in 1985, domestic mine production of silver will be 43 million ounces and U.S. apparent consumption will be 150 million ounces. From a 1981 base, the demand for silver is expected to increase at an average annual rate of 2.2 percent through 1990.

According to Handy & Harman, world supplies of silver from secondary sources in 1984 declined by 24 percent compared with the 1983 level. Outflowings of silver from old scrap, demonetized coin, from hoards in India, and from government sources totaled approximately 116.2 million ounces in 1984, nearly 25 percent below the 1983 level. Although India produces virtually no silver, their large size makes India's silver stocks an important influence on the world price of silver. Although the Indian government banned silver exports early in 1979, an estimated 32.1 million ounces were supplied from India in 1984, almost 29 percent below the approximately 45.0 million ounces exported from India in 1983. World silver from governmental sources declined by nearly 9.8 million ounces during 1984. This drop was partly influenced by the 1983 U.S. Olympic coin program which consumed roughly 10.0 million ounces of silver during that year. Silver from demonetized coin reportedly dropped to 4.0 million ounces during 1984, 50 percent under 8.0 million ounces in 1983. World silver from old scrap and other sources in 1984 amounted to 75.1 million ounces, 11 percent under 84.1 million ounces in 1983.

Handy & Harman also estimated that world stocks of silver amounted to roughly 2.3 billion ounces as of December 31, 1984. This represented an increase of 52.1 million ounces during the year. Private stocks reportedly declined by 7.1 million ounces and so-called "conjectural stocks" (mostly unreported bullion) increased by 63.8 million ounces.

Futures Markets

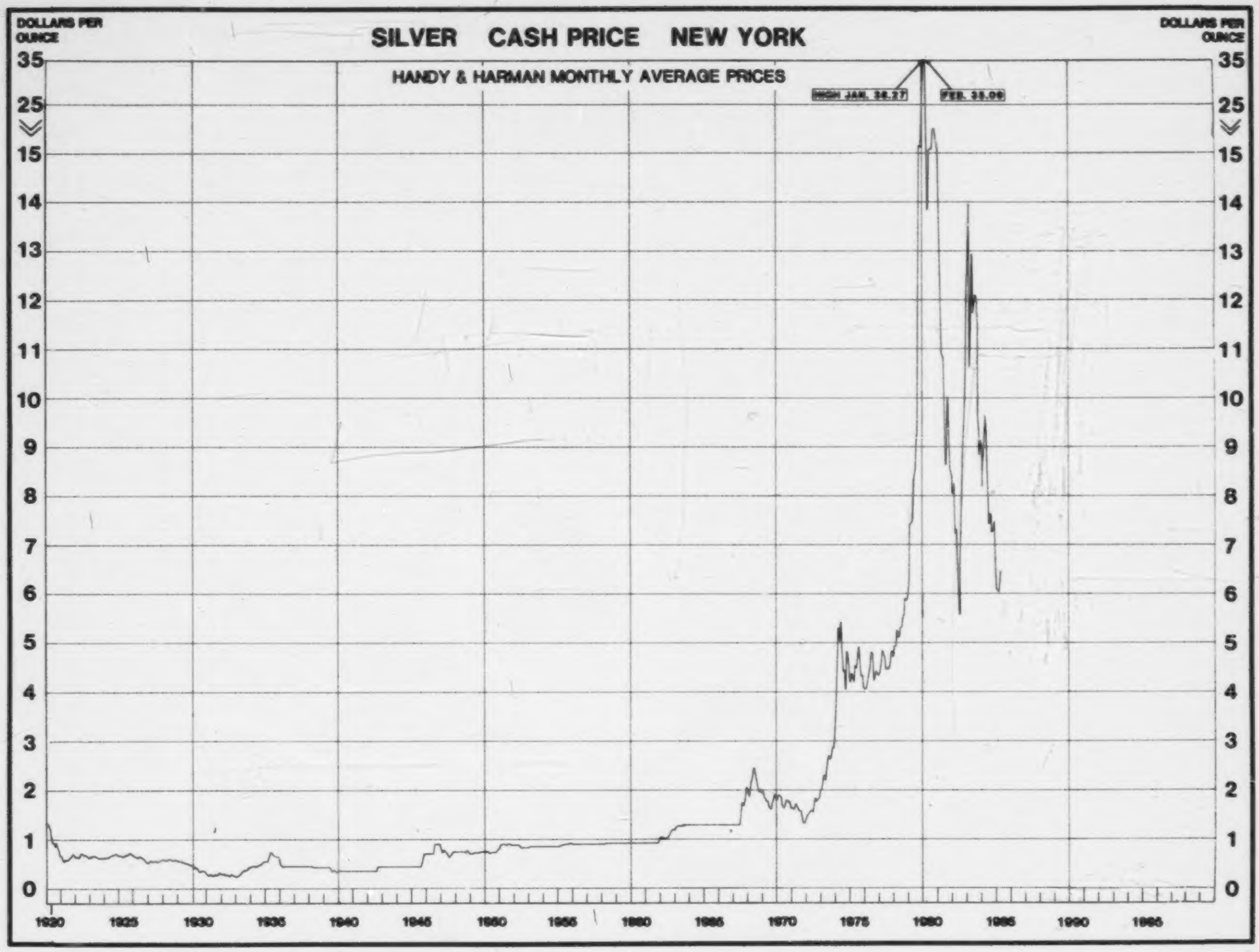
Silver futures are traded on the Commodity Exchange, Inc. in New York, and on the Chicago Board of Trade and MidAmerica Commodity Exchange—both in Chicago. Futures trading is also conducted on the London Metal Exchange and the Winnipeg Commodity Exchange.

World Mine Production of Silver, by Selected Countries In Millions of Fine Ounces (Troy Ounces)

Year	Poland	Argentina	Australia	Zaire (Congo)	Bolivia[1]	Canada	Morocco	W. Germany	Honduras	USSR[2]	Japan	Mexico	Peru	United States	Yugoslavia	World Total[2]
1976	17.8	2.25	25.03	2.47	5.34	41.20	2.05	1.03	3.18	44.0	9.30	42.64	35.58	34.33	4.63	316.4
1977	20.7	2.45	27.53	2.73	5.81	42.24	2.82	1.06	2.82	45.0	9.60	47.03	39.73	38.17	4.68	331.3
1978	21.9	2.16	26.12	4.39	6.29	40.73	3.13	.80	2.79	46.0	9.66	50.78	37.02	39.39	5.13	345.0
1979	22.6	2.21	26.76	3.89	5.74	36.87	3.28	1.04	2.43	46.0	8.68	52.17	39.25	37.90	5.21	348.1
1980	24.6	2.36	24.65	2.73	6.10	33.34	3.15	1.06	1.77	46.0	8.60	50.05	44.42	32.33	4.79	344.0
1981	30.58	2.52	23.91	2.58	6.39	36.30	2.12	1.13	1.82	46.5	9.01	52.92	46.94	40.68	4.44	361.8
1982[3]	21.06	2.68	29.16	1.75	5.47	42.25	2.64	1.28	2.10	46.9	9.84	59.18	53.64	40.25	3.34	383.8
1983[2]	24.90	2.64	32.15	2.00	5.09	35.56	2.85	1.28	2.50	47.2	9.88	61.44	55.87	43.42	3.99	390.6
1984[2]						38.0				48.0		62.0	58.0	41.61		400.0

[1] Exports. [2] Estimate. [3] Preliminary. Source: *Bureau of Mines*

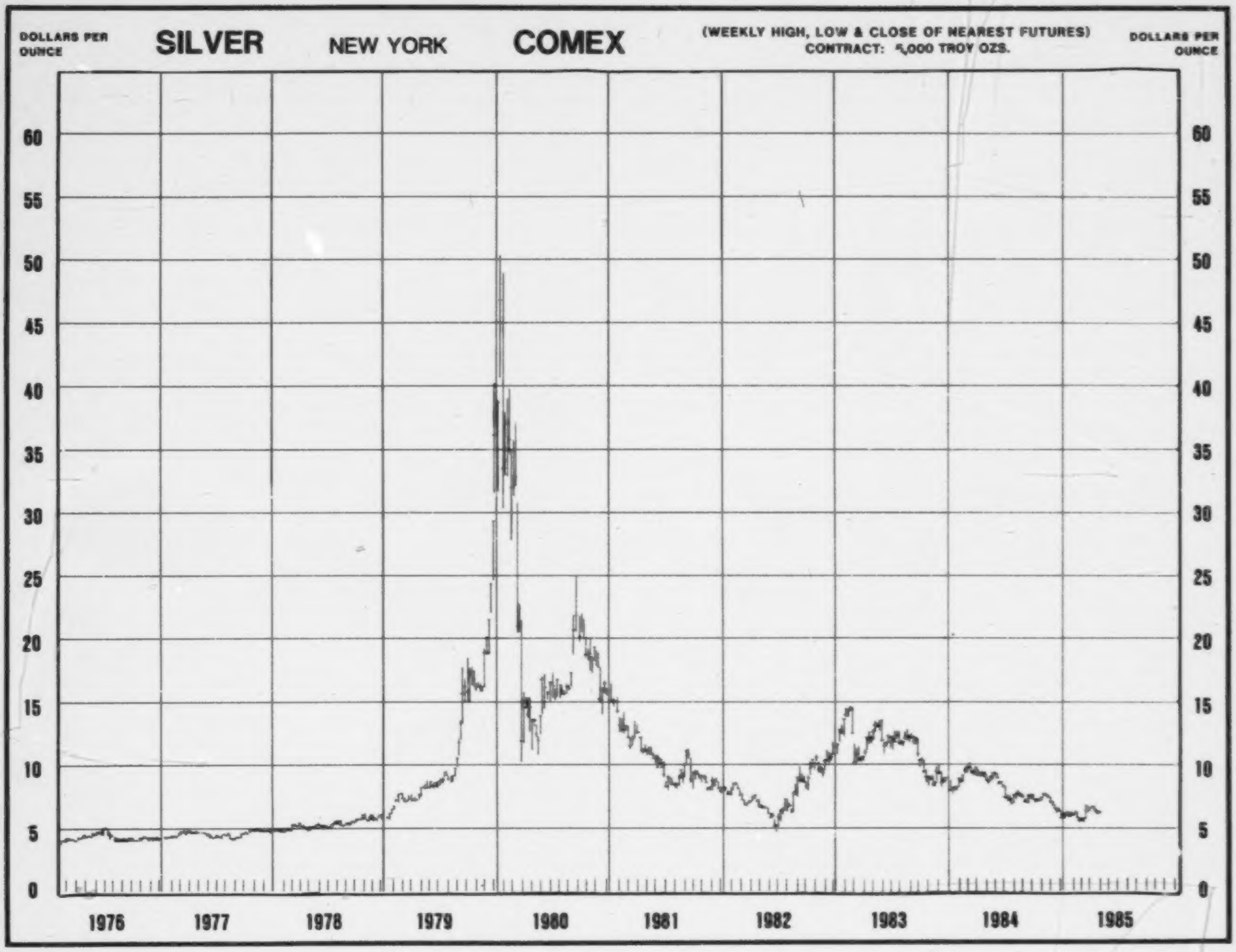
T.594



Average Price of Silver in New York In Cents per Troy Ounce (.999 Fine)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	164.0	160.0	166.9	172.6	166.7	160.8	158.1	158.7	142.1	133.6	132.0	139.4	154.6
1972	147.3	150.4	153.6	157.2	158.3	156.9	173.6	184.6	177.7	181.1	183.3	197.6	168.5
1973	201.7	223.6	230.9	220.7	240.1	262.1	270.6	263.7	267.5	288.6	286.0	313.7	256.0
1974	363.7	535.9	532.6	503.6	543.2	489.6	441.6	443.1	404.9	483.0	469.4	439.1	470.8
1975	419.3	437.0	434.5	420.9	453.8	448.9	470.5	492.5	451.6	432.9	433.2	408.5	442.0
1976	406.3	408.6	418.9	435.1	448.9	481.2	478.0	423.7	429.5	422.5	437.3	434.7	435.4
1977	440.9	452.7	484.2	477.7	469.2	444.3	449.8	444.4	453.9	476.3	482.8	470.6	462.3
1978	493.4	493.6	526.8	511.6	512.0	531.6	533.1	549.5	557.5	591.8	586.5	593.0	540.0
1979	625.5	741.7	745.4	749.3	836.6	853.8	913.5	933.4	1,395.9	1,678.1	1,655.3	2,179.3	1,109.0
1980	3,827.2	3,508.5	2,413.3	1,384.1	1,253.3	1,574.8	1,606.0	1,589.7	2,014.4	2,018.1	1,864.8	1,639.3	2,063.3
1981	1,475.2	1,306.5	1,236.9	1,091.7	1,084.8	1,000.1	863.1	892.3	1,003.6	925.1	854.7	843.2	1,048.1
1982	803.1	826.8	721.3	731.1	667.4	557.8	649.7	713.6	872.5	948.8	991.8	1,058.6	795.0
1983	1,239.6	1,396.4	1,061.9	1,169.4	1,295.3	1,174.9	1,208.8	1,209.6	1,191.5	984.1	883.7	912.1	1,143.9
1984	818.2	912.7	965.1	922.1	897.2	874.4	741.6	761.3	726.3	731.7	748.9	669.4	814.1
1985	609.8	607.0											

Source: Handy & Harman T.595



World[2] Silver Consumption In Millions of Troy Ounces

	Industrial Uses									Coinage							
Year	Canada	France	W. Germany	India	Italy	Japan	Un. Kingdom	United States	World Total	Canada	France	W. Germany	Austria	Mexico	United States	World Total	World Total
1971	6.0	15.6	59.9	16.0	30.5	46.5	25.0	129.1	351.4	.2	.4	19.2	3.2		2.5	28.3	379.7
1972	7.4	16.5	60.0	13.0	32.0	54.3	27.0	151.7	388.9	.1	.3	22.6	5.8		2.3	38.4	427.3
1973	8.6	14.3	64.7	13.0	41.5	69.0	31.0	195.9	477.8	1.4	.1	9.5	6.6		.9	29.2	507.0
1974	9.6	15.5	59.9	15.0	38.6	46.5	25.0	177.0	409.4	8.9	.1	8.8	5.6		1.0	27.9	436.9
1975	10.6	21.2	38.9	13.0	28.9	46.4	28.0	157.7	376.8	10.4	5.2	4.3	13.4	—	2.7	38.8	415.6
1976	9.5	19.0	50.8	18.0	32.1	60.7	28.0	170.5	437.5	8.4	6.7	2.9	6.9	—	1.3	29.7	467.2
1977	8.8	20.6	59.5	17.6	33.8	63.2	32.2	153.6	433.6	.3	6.9	2.6	3.0	4.2	.4	23.4	457.0
1978	9.0	22.2	47.2	20.0	41.8	64.8	29.0	160.2	442.6	.3	11.1	3.6	4.5	6.3	.1	36.3	478.9
1979	8.1	21.5	46.1	19.0	31.1	66.4	26.5	157.2	434.2	.3	7.7	3.7	5.0	5.0	.1	27.8	462.0
1980	8.7	20.2	29.1	19.0	21.8	61.7	20.5	124.7	354.5	.2	—	—	4.3	6.1	.1	13.7	368.2
1981	8.5	20.6	28.0	19.0	12.4	59.8	18.5	116.6	336.8	.2	—	—	3.0	—	—	9.0	345.8
1982	9.0	18.6	33.6	22.5	9.3	63.2	20.0	118.8	348.7	.3	—	—	4.0	—	2.5	12.8	361.5
1983	8.5	18.6	31.1	21.8	9.0	71.5	18.0	116.3	349.5	.4	—	—	2.0	—	11.2	18.6	368.1
1984[1]	9.0	17.0	32.1	25.7	14.7	76.7	19.0	119.0	371.0	.3	—	—	—	2.0	3.0	8.3	379.3
1985																	

[1] Preliminary. [2] Non-communist areas only. *Source: Handy & Harman* T.597

SILVER

U.S. Mine Production of Recoverable Silver In Thousands of Troy Ounces

Year	Arizona	California	Colorado	Idaho	Oregon	Missouri	Montana	Nevada	New Mexico	New York	Tennessee	So. Dakota	Utah	Alaska	Total
1976	7,615	57	4,083	11,561		2,277	3,279	784	892	49	78	58	3,134		34,328
1977	6,828	58	4,663	15,292		2,363	3,367	738	918	56	60	69	3,283		38,166
1978	6,638	58	4,217	18,379		2,056	2,918	804	895	21	N.A.	N.A.	2,885		39,385
1979	7,479	64	2,809	17,144	2	2,201	3,302	560	N.A.	11	N.A.	58	2,454	N.A.	37,896
1980	6,268	49	2,987	13,695	1	2,357	2,024	940	N.A.	21	N.A.	51	2,203	8	32,329
1981	8,055	53	3,009	16,546	7	1,837	2,989	3,039	1,632	29	N.A.	56	2,883	2	40,683
1982	6,309	34	1,934	14,830	—	2,241	6,169	3,142	805	27	N.A.	26	4,343	2	40,248
1983[1]	4,492	27	2,146	17,684	1	2,021	5,708	5,164	N.A.	33	N.A.	62	4,567	4	43,415
1984[2]	4,103		1,918	18,874			5,458	4,317				50		4	41,614

[1] Preliminary. [2] Forecast. *Source: Bureau of Mines* T.599

U.S. Consumption of Silver, by End Use In Thousands of Troy Ounces

Year	Bearings	Brazing Alloys & Solders	Catalysts	Dental & Medical	Electroplated Ware	Electrical & Electronic Products: Batteries	Electrical & Electronic Products: Contacts & Conductors	Jewelry	Mirrors	Photographic Materials	Sterling Ware	Coins. Medallions[2]	Total Net Industrial Consumption	Coinage	Total Consumption
1976	273	11,198	12,267	1,942	9,534	3,490	32,329	10,995	4,622	55,350	19,815	8,240	170,559	1,315	171,874
1977	523	12,362	8,883	2,232	6,844	5,783	31,316	8,059	2,131	53,679	16,690	4,252	153,613	91	153,704
1978	373	10,987	8,197	2,033	7,274	6,029	30,756	6,766	1,862	64,299	17,908	2,727	160,165	45	160,210
1979	332	10,912	5,637	2,295	8,065	4,583	33,506	5,358	1,850	65,978	13,088	4,676	157,258	168	157,426
1980	649	8,508	3,035	2,212	4,350	5,976	27,796	5,893	672	49,825	9,082	4,693	124,694	72	124,766
1981	297	7,718	3,830	1,709	3,904	3,803	26,411	5,368	581	51,025	4,407	2,622	116,670	179	116,849
1982	228	7,384	2,418	1,688	3,254	4,167	27,730	6,260	970	51,769	6,579	1,832	118,840	1,846	120,686
1983[1]	170	5,837	2,414	1,532	3,154	2,637	26,298	6,885	970	51,826	7,022	2,979	116,291	2,128	118,419
1984[3]	259	5,918	2,447	1,574	3,461	2,671	25,632	5,760	968	55,316	3,639	2,563	114,770	2,665	117,435

[1] Preliminary. [2] Includes commemorative objects. [3] Estimate. *Source: Bureau of Mines* T.598

Commodity Exchange, Inc. (COMEX) Warehouse Stocks of Silver In Millions of Ounces

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1976	86.3	84.1	82.8	79.3	77.3	71.8	65.3	58.0	54.6	50.0	49.3	52.3
1977	54.8	56.5	57.2	63.3	65.6	67.0	69.4	70.6	65.2	64.9	60.2	64.5
1978	68.7	70.0	72.3	74.2	73.4	70.8	72.8	73.6	72.4	66.7	64.3	63.0
1979	58.2	52.0	51.8	49.2	50.3	55.5	54.1	48.9	47.3	51.8	60.3	70.2
1980	74.8	76.0	77.8	83.1	84.2	82.3	82.0	81.7	82.6	82.2	87.1	86.1
1981	86.9	86.8	85.4	84.6	85.7	85.1	86.6	85.4	78.8	78.1	76.0	77.3
1982	77.6	76.3	78.5	77.1	79.9	78.0	72.4	66.2	60.0	60.7	59.2	80.6
1983	91.2	90.9	106.4	96.8	91.3	69.8	91.1	93.7	113.6	129.3	129.4	129.6
1984	127.2	123.7	116.8	117.2	115.3							
1985	118.9	121.5	122.3	106.6								

Source: Commodity Exchange, Inc.—New York T.600

United States Production[1] of Refined Silver from All Sources In Thousands of Troy Ounces

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	9,369	11,558	14,260	14,155	10,952	12,633	8,771	10,342	12,598	13,998	16,018	18,378	154,230
1977	13,196	10,114	13,173	13,335	13,260	14,100	5,781	7,840	10,412	13,643	13,002	14,966	143,125
1978	10,694	12,699	12,503	10,871	12,196	12,000	10,186	12,214	10,727	12,666	11,526	12,721	141,003
1979	10,592	10,888	13,070	11,451	11,938	11,600	12,433	9,837	9,118	12,476	12,221	17,008	155,723
1980	18,088	17,548	17,673	16,941	10,400	14,800	6,676	11,583	10,785	10,603	10,578	14,553	166,326
1981	12,889	12,000	11,352	11,889	10,402	11,500	10,433	10,114	10,533	9,954	8,105	11,589	130,783
1982	9,043	8,407	10,300	8,856	9,095	8,840	7,781	8,518	7,872	8,307	9,607	11,655	108,252
1983	9,121	8,533	9,063	9,653	7,663	10,210	8,579	8,342	7,886	8,738	9,880	12,058	112,200
1984	7,094	8,414	8,446	9,827	10,423	8,921	8,879	11,226	8,971	8,386	10,200	13,920	116,400

[1] Output of commercial bars .999 fine, including U.S. Mint purchases of crude. Production is from both foreign and domestic silver. *Sources: American Bureau of Metal Statistics; The Silver Institute, Inc.* T.603

Highest and Lowest Prices of December Silver Futures at New York (Comex) In Dollars per Ounce

Year of Delivery		Yr. Prior to Delivery			Delivery Year												Life of Delivery Range
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1978	High	5.292	5.377	5.166	5.425	5.43	5.877	5.752	5.668	5.718	5.823	5.863	5.795	6.40	6.11	6.02	6.400
	Low	5.022	5.01	4.95	5.16	5.135	5.25	5.10	5.174	5.392	5.325	5.43	5.506	5.71	5.645	5.80	4.715
	Close	5.251	5.134	5.143	5.33	5.29	5.775	5.219	5.621	5.40	5.817	5.597	5.715	6.215	6.00	5.986	—
1979	High	6.94	6.558	6.538	7.16	8.405	8.23	8.363	9.36	9.235	9.975	10.935	16.90	18.13	19.40	25.75	25.750
	Low	6.296	6.205	6.26	6.36	6.99	7.453	7.625	8.31	8.64	8.842	8.985	11.15	15.91	15.85	18.65	5.585
	Close	6.758	6.465	6.514	7.089	8.14	7.839	8.363	9.091	8.96	9.293	10.86	16.80	16.79	18.82	25.50	—
1980	High	19.55	20.528	30.91	44.37	42.15	39.78	20.27	14.75	20.20	20.09	17.14	24.18	22.28	20.32	19.02	44.370
	Low	16.79	17.54	20.705	31.91	35.20	21.27	13.86	11.45	16.975	17.57	15.90	16.67	18.54	17.58	13.37	7.564
	Close	18.395	20.528	30.91	37.645	38.64	21.27	13.86	14.53	19.24	17.84	16.84	21.25	19.10	18.59	16.61	—
1981	High	26.00	23.525	22.615	18.80	15.90	14.67	13.58	12.70	11.84	9.78	10.26	11.80	10.05	9.41	9.05	43.750
	Low	22.12	20.875	17.19	14.60	13.75	12.80	11.90	11.21	9.08	8.77	8.73	8.49	9.00	7.87	7.98	7.970
	Close	22.54	22.015	18.19	15.165	13.72	13.135	12.205	11.685	9.18	9.032	9.72	9.38	9.25	8.205	7.985	—
1982	High	11.45	10.70	10.15	9.49	9.86	8.82	8.39	7.54	6.68	7.72	8.66	9.975	10.07	11.01	11.18	17.975
	Low	10.509	9.11	9.04	8.73	8.65	7.60	7.35	6.67	5.11	5.80	6.32	7.70	8.02	8.95	10.02	5.11
	Close	10.68	9.28	9.185	9.182	8.622	7.87	7.47	6.675	6.406	6.965	8.04	8.24	10.09	10.09	11.14	—
1983	High	11.55	11.90	12.35	15.238	16.07	12.18	13.38	14.42	13.32	13.11	13.25	12.74	10.78	9.86	10.04	16.07
	Low	9.00	9.90	11.07	11.84	12.666	10.71	11.44	12.68	11.513	11.72	11.75	11.01	8.63	8.32	8.44	6.146
	Close	10.94	11.09	11.91	15.238	12.666	11.382	12.715	13.64	12.055	12.225	12.41	11.07	8.63	9.62	8.81	—
1984	High	11.83	10.86	11.10	9.78	10.73	10.97	10.49	9.97	10.13	8.739	8.39	7.90	7.865	7.90	17.165	17.55
	Low	9.596	9.22	9.40	8.47	9.29	9.93	9.465	9.11	8.70	7.06	7.20	7.12	7.12	6.95	6.245	6.245
	Close	9.596	10.649	9.867	9.329	10.42	10.541	9.555	9.835	8.817	7.274	7.66	7.62	7.28	7.019	6.573	—
1985	High	8.81	8.745	7.85	6.93	6.85	7.25										
	Low	8.00	7.70	6.80	6.30	5.93	5.90										
	Close	8.084	7.736	6.86	6.832	6.059	7.106										

Source: Commodity Exchange Inc., of N.Y. (COMEX) T.596

Month–End Total Open Interest of Silver Futures at New York (COMEX) & Chicago In Thousands of Contracts

Year	At New York (COMEX)												At Chicago (1,000 oz.[1])			
	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Apr. 1	July 1	Oct. 1
1978	287.8	245.4	242.4	226.0	217.8	208.6	196.2	212.6	214.4	239.1	277.5	304.8	275.9	240.2	230.0	235.4
1979	299.5	242.9	218.7	203.5	185.7	170.0	153.3	154.5	156.2	167.3	144.3	133.4	252.8	180.5	166.6	156.7
1980	123.6	77.7	63.4	48.5	27.1	23.8	22.9	25.1	24.5	29.8	35.0	36.0	88.9	23.6	22.9	24.0
1981	32.0	27.6	24.3	25.7	26.1	28.8	29.4	31.0	31.0	29.9	32.3	27.5	28.0	21.2	29.8	16.3
1982	27.6	27.5	25.0	29.3	28.3	27.0	27.3	29.0	27.2	24.6	30.0	31.0	7.1	8.6	7.0	12.5
1983	33.9	44.6	54.3	45.9	50.1	57.1	42.8	42.7	48.1	53.0	51.7	55.4	19.4	32.6	35.8	35.1
1984	59.9	62.0	64.3	71.6	64.5	66.5	58.2	64.8	61.3	64.1	73.2	76.2	32.0	37.8	42.7	35.0
1985	81.5	84.3	76.1	74.3									27.1	23.2		

[1] 1,000 oz. Contract from Jan. 1982. Prior data is for 5,000 oz. Contract. *Source: Commodity Exchange of N.Y. (COMEX) & Chicago Board of Trade* T.601

Volume of Trading in Silver Futures at New York (COMEX) In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	330.0	270.7	391.0	287.5	244.9	247.2	254.1	316.2	192.0	469.0	438.0	381.4	3,822
1979	460.0	388.3	304.6	367.3	545.3	480.5	383.9	404.1	283.1	191.7	178.6	111.1	4,081
1980	167.7	76.2	143.5	94.0	46.6	63.3	45.6	41.8	100.9	92.9	97.1	90.6	1,059
1981	70.7	71.0	74.9	72.6	58.0	97.4	77.4	116.0	171.9	121.4	136.6	172.8	1,241
1982	112.8	193.9	211.5	192.9	99.7	217.4	263.1	317.2	258.0	288.9	350.6	372.8	2,869
1983	502.7	601.4	446.6	452.9	516.1	623.7	454.3	656.5	492.0	569.0	596.9	512.7	6,433
1984	570.8	698.8	695.7	629.9	626.7	587.4	554.7	601.5	431.3	449.2	534.2	362.3	6,698
1985	531.8	488.0	518.4										

Source: Commodity Exchange of N.Y. (COMEX) T.602

Soybean Meal

Soybean meal is by far the most important protein meal produced worldwide. In recent years—1980/81–1983/84—it accounted for about 60 to 63 percent of world output of protein meals, and was expected to account for 59 percent of 1984/85 world production. During the 1973/74–1983/84 period, world high protein meal production (including soybean, cottonseed, peanut, sunflower, rapeseed, linseed, copra, palm kernel, and fish) trended upward by 3.4 million metric tons (tonnes) per year, soybean meal equivalent (SME) basis. Soybean meal accounted for more than three-fourths of that growth. The U.S. is the world's largest producer of soybean meal, with about 36 percent of total production.

During the past decade, world meal exports have trended upward by about 1.6 million tonnes per year, SME basis. Soybean meal accounts for nearly three-fourths of the major protein meals traded internationally. U.S. meal exports now account for about 16 percent of world meal trade compared with 29 percent in 1979/80. Brazil displaced the U.S. as the leading meal exporter in 1980/81.

World meal use in the 10 years ending with the 1983/84 season trended upward by 3.4 million tonnes per year, SME basis, but use fell sharply below trend last year and is expected to remain below trend in 1984/85. Soybean meal, in the U.S., is the major high-protein meal fed to livestock. Poultry accounts for about 45 percent of the current domestic soybean meal consumption, with broilers consuming nearly one-half of this amount. Hogs consume nearly one-third of the soybean meal fed in the U.S. Strong interrelationships exist between number and kinds of livestock and soybean meal demand. The demand for soybean meal is also influenced by supplies of competing U.S. meals such as cottonseed and sunflowerseed. Feed grain policies influence the profitability of livestock feeding and, in turn, alter the demand for soybean meal.

The U.S. usually accounts for 27 to 29 percent of world soybean meal consumption, a slightly larger share than the European Community (EC). In March 1985, the Foreign Agricultural Service of the USDA estimated 1984/85 U.S. consumption of soybean meal at 17.19 million tonnes, representing 29 percent of projected world consumption. EC consumption was estimated at 14.11 million tonnes, or nearly 24 percent of the total.

Brazil now accounts for the largest share of world soybean meal exports. In March 1985, the USDA estimated 1984/85 exports by Brazil at 7.55 million tonnes, representing 36 percent of world exports versus 4.72 million (22 percent) for the U.S. and 4.33 million tonnes for the EC (nearly 21 percent).

The USDA, in March 1985, estimated 1984/85 U.S. production of soybean meal at 24.44 million short tons, up 7 percent from 1983/84 output. Domestic use was estimated at 18.95 million tons, up 8 percent; exports at 5.2 million tons, off 4 percent from 1983/84; and ending stocks on September 30, 1985 at 540 thousand tons, up from 255 thousand a year earlier.

Soybean meal prices, in dollars, trended lower throughout 1984, reflecting the strong dollar which adversely affected U.S. exports, the availability of substitute proteins and reduced feeding requirements in some important consuming countries. Sharply reduced demand from the Soviet Union, despite still high livestock numbers, contributed to price easiness.

Futures Market

Soybean meal futures are actively traded on the Chicago Board of Trade.

World Soybean Meal Supply & Distribution In Thousands of Metric Tons

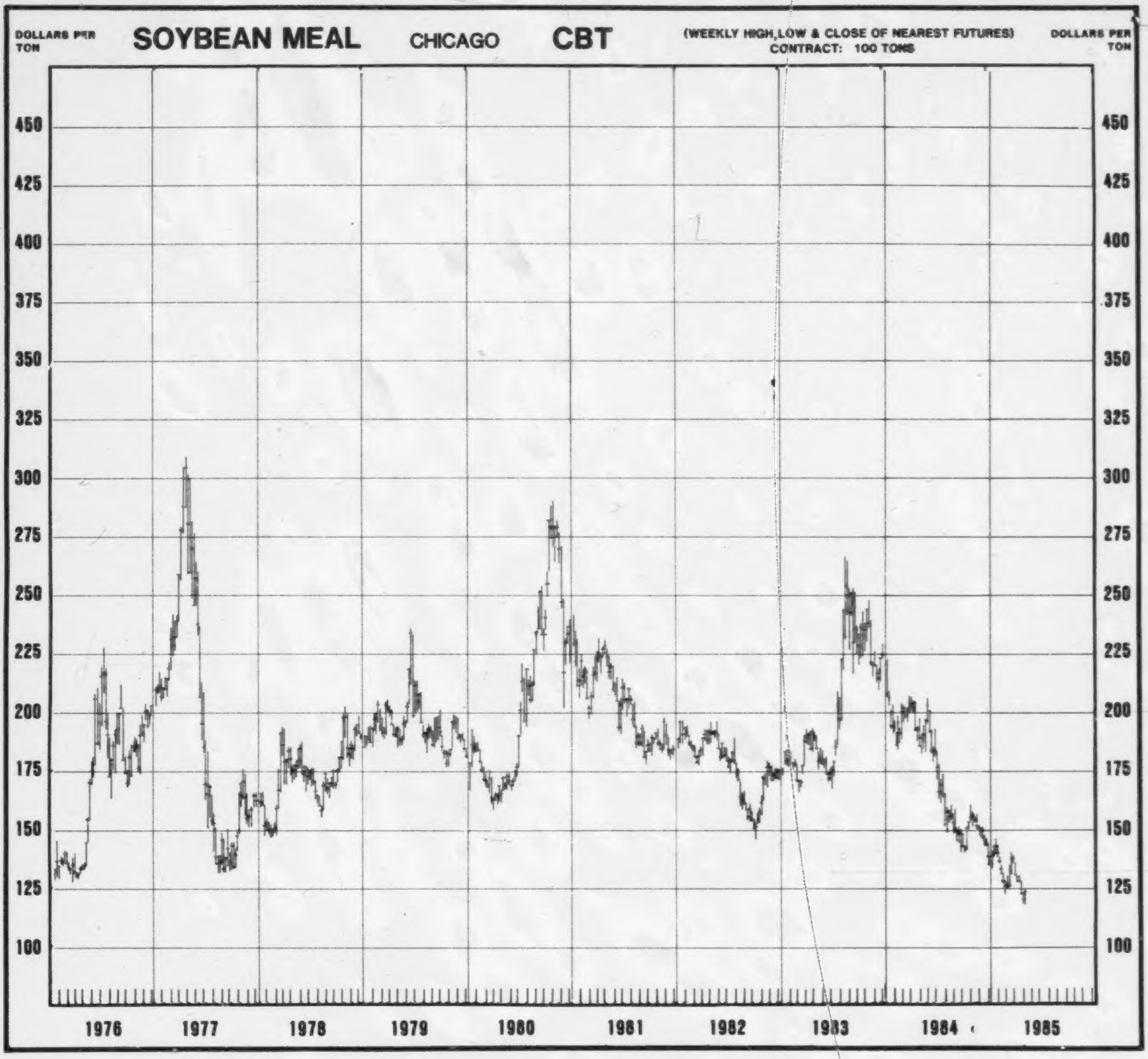
Season Year	Production Brazil	Production China	Production EC-10	Production United States	Production Total Prod.	Exports Brazil	Exports United States	Exports Total Exp.	Imports France	Imports Total Imp.	Consumption EC-10	Consumption United States	Consumption Total Cons.	Stocks[3] Brazil	Stocks[3] United States	Stocks[3] Total Stocks
1980–1	10,615	2,920	8,210	22,055	56,874	7,740	6,154	18,849	2,969	18,900	13,851	15,958	56,400	1,092	148	2,392
1981–2	9,945	3,434	9,295	22,348	59,101	8,347	6,266	20,724	3,503	20,970	16,870	16,071	59,840	615	159	1,899
1982–3	10,000	3,083	8,769	24,235	62,090	8,239	6,449	23,283	3,330	23,107	15,330	17,510	61,250	680	430	2,550
1983–4[1]	9,702	3,195	7,130	20,646	56,830	7,706	4,931	20,804	3,399	21,040	14,257	15,914	56,830	984	231	2,790
1984–5[2]	9,700	3,296	7,400	22,170	59,710	7,550	4,717	20,890	3,350	20,880	14,210	17,190	59,150	1,130	490	3,340

[1] Preliminary. [2] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* 607a

Supply and Distribution of Soybean Meal in the United States In Thousands of Short Tons

Year Begin. Oct.	Supply For Stocks Oct. 1	Supply Production Total	Supply Production For Animal Feed	Supply Production For Edible Protein Pdt's.	Supply Total	Distribution Domestic Feed[2]	Distribution Exports	Distribution Shipments to U.S. Terr.	Distribution Total	Price Per Ton Bulk, Decatur 44% Protein	Price Per Ton Bulk, Decatur 49% Solvent
1980–1	226	24,312	23,232	286	24,538	17,591	6,784	—	24,375	218.18	235.13
1981–2	163	24,634	23,500	308	24,797	17,714	6,908	—	24,622	182.52	196.63
1982–3[1]	175	26,714			26,889	19,306	7,109	—	26,415	187.19	200.90
1983–4[3]	474	22,801			23,275	17,550	5,500	—	23,050	190.00	203.20
1984–5[3]	225	24,065			24,290	18,300	5,600	—	23,900	155.00	

[1] Preliminary. [2] Includes small quantities used for industrial purposes, estimated at 30,000 tons annually. [3] Estimate. *Source: Economic Research Service, U.S.D.A.* T.606



Stocks (at Oil Mills) of Soybean Cake & Meal in the United States In Thousands of Short Tons

Year	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1
1973–4	183.2	234.3	242.2	284.6	249.0	281.1	361.6	348.0	427.9	514.3	475.9	535.4
1974–5	507.3	508.2	563.7	529.0	541.0	540.0	556.7	470.5	448.1	421.7	394.8	404.5
1975–6	358.3	396.1	441.4	371.4	378.1	419.5	358.3	358.8	462.8	369.8	406.9	350.5
1976–7	354.9	423.5	427.7	353.9	384.7	429.9	412.6	449.0	408.3	390.7	399.0	270.4
1977–8	228.3	270.0	239.8	245.1	251.7	239.7	227.3	308.2	263.3	191.1	262.6	234.1
1978–9	242.9	210.4	178.2	260.5	215.1	198.4	210.4	231.6	207.4	205.3	232.2	140.3
1979–0	224.3	204.1	164.2	207.7	158.7	160.6	219.1	193.9	265.0	262.0	232.4	225.1
1980–1	189.7	211.1	350.0	221.8	209.7	214.4	232.2	184.4	254.0	209.7	156.1	199.7
1981–2	233.8	309.2	314.8	279.4	315.7	324.9	190.3	172.1	309.3	224.9	209.1	189.7
1982–3	175.2	342.8	349.6	332.3	400.2	422.8	341.0	356.1	341.5	272.3	365.2	378.5
1983–4[1]	474.1	419.3	466.8	391.1	475.8	446.7	460.7	418.6	427.2	391.2	355.5	242.7
1984–5[1]	255.4	236.1	285.7	336.8	291.1	301.3						

[1] Preliminary. *Sources: Economic Research Service, U.S.D.A.; Bureau of the Census* T.613

SOYBEAN MEAL

U.S. Exports of Soybean Cake & Meal by Country of Destination In Thousands of Metric Tons

Yr. Beg. Oct. 1	Belg.-Lux.	Japan	Canada	Denmark	France	W. Germany	Spain	Ireland	Italy	Netherlands	Philippines	Poland	United Kingdom	Yugoslavia	Grand Total
1978-9	3.8	204.5	416.0	65.6	355.1	717.6	253.5	117.9	691.1	748.1	—	243.0	66.8	57.9	5,998
1979-0	13.3	210.0	355.9	48.5	270.2	1,013	58.0	74.1	855.7	1,490	41.1	400.0	69.0	152.9	7,196
1980-1	48.9	153.7	331.2	.1	8.0	710.3	21.6	.5	684.3	1,502	0	312.3	56.9	191.4	6,154
1981-2[1]	13.7	51.7	339.6	0	62.6	630.9	82.3	15.8	947.3	2,201	69.7	0	106.9	84.7	6,266
1982-3[1]	10.7	0	401.4	3.5	3.7	1,073	28.6	21.2	953.5	2,066	82.5	57.1	72.7	80.1	6,449
1983-4[1]	7.4	.5	427.5	0	0	1,154	63.0	4.6	493.0	693.1	293.8	278.5	2.5	8.1	4,931

[1] Preliminary. *Source: The Bureau of the Census, U.S.D. of Commerce* T.607

Average Price of Soybean Meal[1] (44% Solvent) at Decatur In Dollars per Short Ton (Bulk)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	173.10	164.00	190.50	184.10	188.50	180.80	183.10	174.10	175.40	188.40	188.70	200.40	182.59
1979	196.50	202.40	306.20	202.80	199.70	221.40	213.60	201.00	200.70	193.50	195.20	200.10	202.76
1980	192.40	186.50	176.90	166.60	178.90	173.40	200.40	220.10	247.20	259.10	274.10	236.40	209.33
1981[1]	223.50	212.50	210.40	222.00	221.00	200.90	204.10	202.25	190.00	180.75	178.40	187.50	202.78
1982	191.00	191.00	183.60	190.25	192.40	183.60	181.90	169.00	160.80	157.00	173.40	178.50	179.37
1983	179.75	177.10	177.30	186.75	185.75	175.50	189.30	232.80	233.60	228.60	224.70	216.60	200.64
1984	201.90	184.40	196.40	190.00	187.40	174.40	157.60	151.60	144.90	141.60	135.20	136.75	166.84
1985	135.20	125.25											

[1] Prior to 1981 prices are at Chicago—44% Protein; Bagged. *Source: Consumer Marketing Service, U.S.D.A.* T.608

Production of Soybean Cake & Meal in the U.S. In Thousands of Short Tons

Crop Year	Production													Meal in Form of Soybeans[2]
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Total	
1978-9	2,052	2,069	2,222	2,095	1,892	2,052	1,921	1,999	1,910	1,836	1,759	1,766	23,573	17,681
1979-0	2,214	2,359	2,431	2,477	2,319	2,379	2,129	2,167	1,922	1,990	1,945	1,896	26,227	21,118
1980-1	2,253	2,291	2,179	2,133	1,838	2,074	1,976	1,896	1,709	1,681	1,726	1,763	23,518	
1981-2	2,502	2,326	2,451	2,266	2,077	2,050	1,931	2,066	1,844	1,684	1,620	1,819	24,634	
1982-3	2,386	2,581	2,679	2,628	2,221	2,259	1,950	1,993	1,956	1,934	2,053	2,075	26,714	
1983-4[1]	2,288	2,049	2,123	2,220	1,872	2,029	1,760	1,872	1,665	1,629	1,690	1,559	22,756	
1984-5[1]	2,107	2,326	2,381	2,226	1,894									

[1] Preliminary. [2] Calculated at 47.5 lbs of meal per bushel. *Sources: Economic Research Service, U.S.D.A.; Bureau of Census.* T.609

Month End Open Interest of Soybean Meal Futures at the Chicago Board of Trade In Contracts

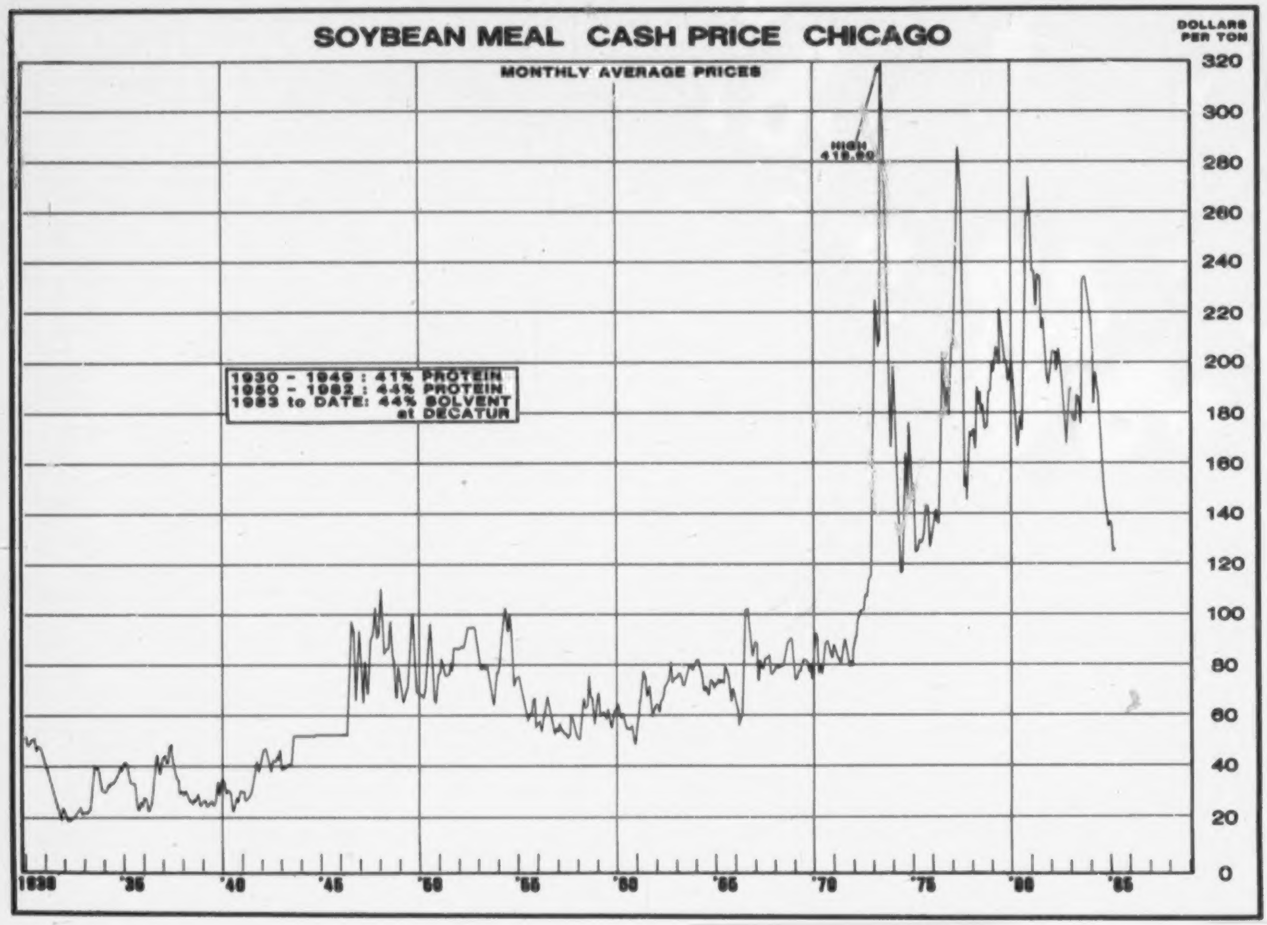
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	30,042	34,991	42,325	40,969	50,633	50,628	52,895	56,288	52,315	60,233	63,302	61,014
1979	48,076	54,316	54,873	48,923	49,678	56,627	47,847	47,804	49,348	56,178	52,426	50,072
1980	49,490	53,379	51,143	47,016	46,603	47,769	50,797	61,261	66,805	82,421	84,051	64,965
1981	53,077	50,584	47,002	51,831	45,160	50,909	45,901	48,379	48,152	47,619	48,140	38,804
1982	41,034	39,700	43,830	45,035	45,481	45,877	47,094	50,823	46,833	44,740	47,300	46,016
1983	50,744	44,808	52,979	46,653	42,893	40,900	50,340	66,826	64,266	64,124	63,461	60,248
1984	55,566	54,875	64,511	58,259	74,576	61,051	48,893	48,410	43,264	47,877	46,919	37,167
1985	39,110	43,110	45,164									

Source: Chicago Board of Trade T.610

Volume of Trading of Soybean Meal Futures at the Chicago Board of Trade In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	173.1	123.6	275.5	213.6	190.2	224.5	191.3	207.3	162.2	257.3	260.2	214.2	2,493
1979	204.7	244.5	290.3	219.4	211.2	382.2	257.9	182.6	186.3	219.6	183.3	146.8	2,648
1980	172.6	159.2	152.1	183.0	159.1	183.9	370.8	281.5	371.9	413.6	369.3	401.7	3,219
1981	261.9	203.1	220.9	254.3	218.4	294.8	301.8	241.3	276.3	219.0	242.8	304.4	3,040
1982	219.6	238.1	258.6	279.7	197.3	244.0	229.9	225.1	198.8	241.0	233.4	218.9	2,784
1983	269.2	248.0	252.7	272.9	238.6	259.5	320.5	528.2	447.6	349.4	413.1	271.8	3,872
1984	298.8	283.3	299.6	355.5	449.0	424.0	382.8	307.5	271.2	246.3	266.7	237.3	3,822
1985	252.1	232.6	244.5										

Source: Chicago Board of Trade T.611



High, Low & Closing Prices of May Soybean Meal Futures on the Chicago Board of Trade $ per Ton

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1979	High	—	180.0	182.0	181.0	172.0	178.5	183.0	202.0	197.0	193.9	195.5	209.5	205.5	202.7	194.0	209.5
	Low	—	168.0	167.0	168.0	165.0	165.1	172.5	179.0	179.7	184.0	184.5	190.5	193.7	186.5	185.8	165.0
	Close	—	169.0	181.2	173.2	167.7	175.8	178.5	197.0	187.0	188.3	192.2	203.2	202.2	186.9	188.9	—
1980	High	—	201.0	204.0	233.0	221.0	205.5	211.3	213.0	204.5	201.2	197.5	193.0	182.0	169.0	173.0	233.0
	Low	—	195.7	197.5	202.0	196.0	194.5	197.5	188.5	189.3	189.6	179.9	179.0	160.7	158.1	163.3	158.1
	Close	—	200.0	203.7	202.5	198.7	203.0	207.0	192.7	199.9	189.7	190.3	179.4	161.4	163.9	168.0	—
1981	High	206.5	200.5	201.0	205.0	238.0	242.5	265.0	299.0	300.5	294.8	259.5	232.5	224.0	231.7	230.2	300.5
	Low	193.0	191.0	191.5	190.3	205.0	217.0	241.0	244.3	275.0	220.7	213.7	214.5	205.2	216.9	214.0	190.3
	Close	195.2	195.5	192.0	205.0	229.6	242.5	251.7	290.2	292.7	249.0	220.7	215.2	220.8	226.9	214.0	—
1982	High	—	261.5	252.0	242.0	241.0	230.0	218.0	210.5	206.5	203.5	197.0	197.7	188.5	196.0	196.5	261.5
	Low	—	248.5	234.5	221.0	223.0	207.0	203.5	201.8	194.1	181.5	187.8	182.7	178.4	186.2	188.0	181.5
	Close	—	249.5	239.0	225.0	231.5	209.0	206.5	203.5	197.3	188.3	195.9	186.1	187.7	190.9	189.0	—
1983	High	—	215.0	210.0	205.5	199.0	195.5	176.0	169.0	180.5	178.5	186.0	186.1	192.8	193.3	190.3	215.0
	Low	—	203.0	201.5	197.0	189.5	171.0	165.3	160.3	166.5	171.3	174.1	170.6	172.5	183.3	176.1	160.3
	Close	—	209.5	201.5	197.7	192.0	174.0	166.5	166.0	178.0	175.2	185.6	171.4	189.7	189.4	181.3	—
1984	High	219.5	217.5	213.0	198.0	229.0	267.5	261.0	246.0	249.6	229.5	221.5	201.5	210.0	205.4	199.0	267.5
	Low	213.5	207.5	194.2	185.0	194.0	218.8	229.0	229.5	220.0	212.2	193.2	188.9	200.5	182.5	183.0	182.5
	Close	215.2	211.5	194.2	195.0	216.2	244.0	240.0	232.0	226.7	225.0	197.4	200.7	202.9	183.8	198.4	—
1985	High	206.9	206.5	195.7	201.0	197.0	180.0	172.0	175.0	173.3	165.5	154.0	147.0	141.5			
	Low	198.5	187.0	190.5	188.2	169.5	167.5	160.0	160.5	163.0	150.1	145.6	129.5	130.1			
	Close	205.0	187.8	198.0	200.5	171.3	171.0	162.0	169.7	164.8	151.1	147.6	130.3	138.1			

Source: Chicago Board of Trade

T.612

Soybean Oil *(See feature article on page 21T)*

Soybean oil continued to dominate world edible vegetable oil production in the 1983/84 season, accounting for 31 percent of total vegetable oil output, and 23 percent of total fats and oils production (including industrial and marine oil, and animal fats such as butter, tallow & grease). In the 1984/85 season, soybean oil was expected to account for 30 percent of edible vegetable oil production and about 22.5 percent of estimated total fats and oils production worldwide.

Soybean oil accounted for about 31 percent of world consumption of major vegetable and marine oils in 1983/84, and about 29 percent in 1984/85, according to an estimate by the USDA in March 1985. World consumption of major vegetable and marine oils was projected to increase about 6 percent in 1984/85. World exports of major vegetable and marine oils in 1984/85 were expected to increase some 10 percent compared to the 1983/84 season.

World stocks of major vegetable and marine oils at the end of the 1984/85 season were projected by the USDA in March 1985 to be about 2 percent lower than the relatively low stocks at the end of the 1983/84 season. Soybean oil was expected to account for about 28 percent of world stocks versus 32 percent at the end of the 1983/84 season.

In the U.S., beginning 1984/85 season stocks of soybean oil amounted to only 721 million pounds, 43 percent smaller than the 1.26 billion pounds on hand on October 1, 1983. The USDA, in March 1985, estimated 1984/85 U.S. production of soybean oil at 11.39 billion pounds, nearly 5 percent above 1983/84 output. However, because of the low beginning stocks, total supply for the 1984/85 season was estimated at 12.12 billion pounds versus 12.13 billion in the previous season. Crushing margins were generally unsatisfactory because of low foreign demand and prices for soybean meal, and there was some question whether production would equal earlier expectations.

Domestic use of soybean oil in the 1984/85 season was forecast by the USDA to increase marginally to 9.70 billion pounds versus 1.81 billion in 1983/84. However, high prices and the expected increasing availability of competing oils, particularly palm oil and rapeseed oil, influenced a 4 percent reduction in projected U.S. soybean oil exports in 1984/85, to 1.75 billion pounds from 1.81 billion in 1983/84. Accordingly, total distribution in 1984/85, in early March 1985, was expected to be only slightly above 1983/84 distribution of 11.41 billion pounds. Largely because of the relatively small stocks at the start of the season, 1984/85 U.S. ending stocks of soybean oil were expected to total only about 665 million pounds, 8 percent less than the already low holdings a year earlier.

U.S. soybean oil prices were helped in the second quarter of calendar year 1984 by tight supplies and high prices for palm oil and rapeseed oil as well as low supplies of U.S. soybean oil. Prices sagged later as edible vegetable oil supplies increased seasonally. Yet total world supplies of the major edible vegetable oils remained tight well into the 1984/85 season, contributing to renewed price firmness in early spring 1985.

The Soviet Union purchased about 40,000 tonnes of U.S. soybean oil through mid-March 1985, the first Soviet purchases of U.S. soybean oil since 25,000 tonnes were purchased in 1979.

Futures Markets

Soybean oil futures are actively traded on the Chicago Board of Trade.

World Supply & Demand of Soybean Oil In Thousands of Metric Tons

Season Crop Year	Production				Exports			Imports		Consumption					Stocks[3]	
	Brazil	EC-10	United States	Total Prod.	Brazil	United States	Total Exp.	India	Total Imp.	Brazil	EC-10	India	United States	Total Con.	United States	Total Stocks
1980–1	2,601	1,829	5,112	12,849	1,153	740	3,343	639	3,440	1,534	1,477	708	4,134	12,860	787	1,704
1981–2	2,406	2,007	4,980	12,984	852	942	3,500	460	3,430	1,542	1,596	533	4,325	13,180	500	1,436
1982–3	2,564	1,911	5,462	13,790	1,020	918	3,740	537	3,730	1,612	1,494	613	4,472	13,710	572	1,500
1983–4[1]	2,352	1,610	4,932	12,990	987	823	3,760	750	3,800	1,519	1,290	740	4,354	13,370	327	1,160
1984–5[2]	2,350	1,580	5,170	13,420	900	790	3,670	550	3,660	1,570	1,240	767	4,399	13,570	300	1,000

[1] Preliminary. [2] Forecast. [3] End of Season. *Source:* Foreign Agricultural Service, U.S.D.A. 168b

Production, Consumption, Stocks and Foreign Trade of Soybean Oil in the U.S. In Millions of Pounds

Year	Production		Consumption		Stocks December 31		Imports for Consumption	Exports	
	Crude	Refined	In Refining	In End Pdt's.	Crude	Refined		Crude	Refined
1975	7,861	6,423	6,686	6,830	495.3	304.6	—	758	
1976	9,640	7,185	7,476	7,577	1,141	347.1	—	901.7	77.3
1977	8,836	7,790	8,092	7,451	524.0	340.0	.2	1,427.3	81.3
1978	10,625	8,618	8,955	8,175	623.1	347.5	—	1,560.8	77.8
1979	11,504	9,110	9,456	8,656	656.6	373.5	—	2,489	
1980	12,097	8,982	9,300	8,585	1,369.6	368.2	—	2,417	
1981[1]	11,301	9,461	9,817	9,024	1,680.2	343.6	—	1,805	
1982[1]	11,183	9,671	10,042	9,307	1,241.1	345.6	—	2,057	
1983[1]	11,653	9,590	9,939	9,418	1,559.3	360.0	—	1,732	
1984[1]	11,004	9,716	9,986	9,932	500.2	276.9	—		

[1] Preliminary. *Source: Bureau of Census* T.614

U.S. Exports of Soybean Oil,[1] by Country of Destination In Thousands of Metric Tons

Yr. Beg. Oct. 1	Australia	Colombia	Canada	Chile	Ecuador	France	Haiti	Peru	India	Israel	Mexico	Morocco	Pakistan	Panama	Egypt	Grand Total
1975–6	13.1	14.2	31.8	1.0	19.5	—	14.3	14.5	15.8	9.9	3.1	4.9	150.8	13.2	.5	443
1976–7	20.1	27.3	26.0	12.0	16.2	—	17.2	57.3	252.2	3.1	15.4	3.0	119.2	12.5	1.4	702
1977–8	21.0	44.1	27.7	22.0	26.0	5.0	13.8	68.6	247.7	6.3	29.6	5.6	95.8	8.3	6.1	933
1978–9	16.2	84.1	20.9	22.8	22.4	3.6	17.2	29.4	181.1	9.8	5.1	6.0	163.3	19.0	13.9	1,059
1979–0	16.4	82.6	14.8	13.2	35.3	2.9	22.8	36.2	427.7	9.6	31.4	2.3	147.4	17.9	6.0	1,220
1980–1	16.5	60.3	7.8	22.8	38.6	0	22.4	41.2	61.8	5.2	21.6	5.0	125.7	14.7	3.4	739
1981–2	22.6	77.4	5.4	1.7	36.2	0	8.8	46.8	68.4	.3	91.1	9.7	259.9	21.7	6.9	942
1982–3	5.0	69.5	7.5	—	50.4	—	20.4	70.2	54.9	.4	16.3	9.0	236.7	16.4	3.5	918
1983–4[2]	.3	24.8	10.0	—	41.1	—	12.5	24.9	169.4	.5	84.4	2.5	200.1	15.7	3.6	823

[1] Crude & refined oil combined as such. [2] Preliminary. *Source: The Bureau of the Census, U.S.D. of Commerce.* T.615

Supply & Distribution of Soybean Oil in the U.S. In Millions of Pounds

Year Begin. Oct.	Production	Stocks Oct. 1	Exports & Shipments	Domestic Disappearance											
					Food					Non-Food					
				Total	Shortening	Margarine	Cooking & Salad Oils	Other Edible	Total Food	Paint & Varnish	Resins & Plastics	Fatty Acids	Other Inedible	Foots & Loss	Total Non-Food
1974–5	7,375	794	1,090	6,518	1,882	1,486	2,680	22	6,070	82	58	16	31	260	448
1975–6	9,630	561	1,035	7,906	2,416	1,691	3,274	24	7,405	94	96	23	25	294	501
1976–7	8,578	1,251	1,607	7,454	2,189	1,568	3,165	25	6,947	85	83	26	36	278	507
1977–8	10,288	771	2,137	8,273	2,279	1,585	3,325	29	7,621	87	79	42	33	308	549
1978–9	11,323	729	2,411	8,942	2,480	1,593	3,825								
1979–0	12,105	776	2,690	8,981	2,680	1,643	4,060								
1980–1	11,270	1,210	1,631	9,113	2,660	1,651	4,041								
1981–2	10,979	1,736	2,077	9,536	2,991	1,723	4,368	51	9,133						
1982–3	12,040	1,103	2,025	9,857	2,944	1,615	4,668	58	9,284						
1983–4[1]	10,884	1,261	1,700	9,650	3,212	2,480	4,440	100	10,964						
1984–5[2]	11,165	795	1,500	9,750											
1985–6[2]		710													

[1] Preliminary. [2] Forecast. *Source: Economic Research Service, U.S.D.A.* T.623

U.S. Production of Crude Soybean Oil In Millions of Pounds

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1974–5	672.9	627.5	621.4	651.6	555.9	632.4	600.9	557.6	557.8	623.9	674.5	599.8	7,376
1975–6	783.9	776.7	846.7	807.4	757.6	852.4	846.1	869.8	813.9	788.7	720.5	766.1	9,630
1976–7	807.4	804.0	805.7	786.7	791.2	823.7	747.3	682.4	631.1	566.6	553.6	578.2	8,578
1977–8	821.9	922.3	931.5	911.9	809.5	943.3	866.9	908.2	795.1	777.9	815.8	783.3	10,287
1978–9	984.3	974.8	1,050	989.1	902.3	982.2	939.6	964.7	930.5	899.9	856.7	849.9	11,324
1979–0	1,020	1,068	1,102	1,115	1,065	1,098	993.7	1,010	901.6	927.8	913.8	890.1	12,105
1980–1	1,080	1,078	1,024	1,011	887.8	991.3	954.2	914.9	830.7	815.8	827.2	855.6	11,271
1981–2	1,125	1,018	1,070	995.6	917.7	912.1	866.8	930.2	828.4	765.6	732.0	818.3	10,979
1982–3	1,079	1,145	1,191	1,167	997.0	1,015	881.3	908.9	891.3	888.0	930.2	945.3	12,040
1983–4[1]	1,081	957.7	990.9	1,053	896.9	972.7	846.7	906.3	803.5	788.2	819.4	755.9	10,872
1984–5[1]	995.5	1,070	1,095	1,027	879.0								

[1] Preliminary. *Source: Bureau of the Census* T.618

U.S. Production of Refined Soybean Oil In Millions of Pounds

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1974–5	585.0	511.4	482.1	515.0	468.6	497.1	497.0	467.9	489.6	509.3	550.9	538.3	6,112
1975–6	666.9	617.3	605.0	611.9	558.7	646.5	606.6	624.2	627.1	584.7	607.9	568.1	7,325
1976–7	575.4	596.3	578.0	564.4	578.4	710.9	636.9	651.6	589.3	563.9	661.0	623.8	7,330
1977–8	700.1	764.2	745.0	705.6	653.2	801.4	738.0	732.1	649.9	636.8	725.3	679.9	8,532
1978–9	782.8	747.7	765.7	753.3	681.7	768.9	760.1	835.4	742.8	748.3	762.8	693.0	9,043
1979–0	805.9	797.6	760.3	801.9	760.5	767.7	687.1	712.8	669.0	720.3	760.7	764.5	9,038
1980–1	784.1	760.5	763.1	741.6	706.3	833.9	741.2	754.9	812.9	765.4	813.3	812.1	9,289
1981–2	833.6	840.9	805.2	768.7	767.6	866.4	754.5	817.3	866.3	775.4	811.7	794.0	9,702
1982–3	824.6	827.8	795.1	784.1	727.1	841.8	800.9	843.1	824.0	778.7	837.7	828.8	9,714
1983–4[1]	839.2	747.2	737.1	797.9	813.2	841.8	763.8	859.5	794.6	767.9	752.2	760.9	9,475
1984–5[1]	907.6	835.5	821.2	838.7	796.9								

[1] Preliminary. *Source: Bureau of the Census* T.617

SOYBEAN OIL

Soybean Oil Consumption in End Products in the U.S. In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	673.7	599.8	644.9	583.4	585.0	571.3	597.0	569.2	524.4	621.8	552.1	516.4	7,039
1975	553.4	521.2	528.2	540.3	527.4	531.3	555.3	562.8	604.8	672.0	609.2	624.4	6,830
1976	658.0	617.6	687.3	623.4	625.9	634.6	626.8	635.1	623.7	621.3	609.1	613.8	7,577
1977	571.5	591.2	694.5	597.1	611.0	553.8	517.9	629.8	621.5	658.6	682.3	721.9	7,451
1978	664.1	648.8	771.7	686.5	662.4	640.5	596.2	699.8	672.5	715.9	709.3	707.5	8,175
1979	695.1	636.2	755.3	682.4	775.0	701.6	711.4	744.8	700.9	781.4	742.2	730.1	8,656
1980	750.7	719.4	762.9	671.6	693.6	683.7	671.2	754.5	737.1	719.1	682.6	738.7	8,585
1981	698.7	680.7	775.1	722.3	728.7	774.0	741.1	755.1	796.4	796.8	783.6	749.3	9,002
1982	740.0	737.7	809.6	715.2	761.0	834.6	775.2	811.9	820.5	799.9	763.1	733.2	9,302
1983	761.6	702.2	827.3	765.9	814.9	830.3	745.1	847.0	894.3	812.7	711.4	705.2	9,418
1984[1]	827.6	821.7	837.8	781.1	857.4	824.4	744.7	772.2	780.6	944.5	883.4	856.1	9,932
1985[1]	898.8	799.3											

[1] Preliminary. *Source: Bureau of the Census*

T.624

U.S. Exports of Soybean Oil (Crude & Refined) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	122.2	120.2	98.3	146.0	96.9	226.6	239.0	84.1	83.2	85.9	111.1	193.0	1,067
1975	129.0	71.6	116.1	57.6	72.9	55.7	65.3	13.1	13.5	43.8	78.9	40.4	758.0
1976	32.6	120.2	89.6	55.5	160.9	74.4	77.6	41.8	151.5	100.8	107.7	75.8	1,088
1977	103.7	92.3	236.4	103.3	209.4	159.9	154.2	72.0	66.0	108.8	185.5	175.3	1,667
1978	113.1	141.8	252.6	218.9	176.4	147.2	165.5	108.8	193.4	96.8	154.8	175.4	1,945
1979	219.1	249.8	199.0	185.6	107.3	299.0	166.2	187.4	159.1	127.8	208.5	261.9	2,371
1980	173.4	250.0	325.4	269.6	327.3	194.6	109.7	175.7	171.2	112.5	84.7	120.5	2,315
1981	116.0	113.8	202.8	76.1	109.6	108.8	93.1	291.7	97.9	187.2	146.6	184.3	1,698
1982	43.9	176.7	126.5	148.5	103.3	208.0	270.2	237.4	244.1	181.1	174.9	142.0	2,057
1983[1]	124.0	225.9	90.4	305.7	127.5	94.1	208.9	125.1	225.1	55.1	54.7	95.5	1,732
1984[1]	161.3	289.9	203.1	142.1	173.3	157.3	140.0	73.0					

[1] Preliminary. *Source: Dept. of Commerce*

T.619

U.S. Stocks of Soybean Oil (Crude & Refined) at Factory & Warehouses In Millions of Pounds

Year	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1
1974–5	793.6	734.7	681.5	673.6	689.6	633.8	647.4	662.2	606.7	528.6	544.3	567.1
1975–6	560.5	568.0	657.7	799.9	844.8	913.3	946.0	1,061	1,109	1,275	1,230	1,295
1976–7	1,251	1,351	1,432	1,488	1,606	1,616	1,493	1,485	1,361	1,174	1,037	942.5
1977–8	771.1	756.4	771.1	864.0	913.8	856.5	803.8	822.2	828.7	834.4	820.8	777.5
1978–9	728.6	813.4	837.1	970.6	932.2	942.8	1,004	987.3	1,043	922.9	915.4	815.1
1979–0	775.8	819.8	867.3	1,030	1,155	1,205	1,176	1,184	1,145	1,226	1,305	1,263
1980–1	1,210	1,428	1,677	1,738	1,900	1,976	2,017	2,119	2,166	2,139	2,024	1,783
1981–2	1,736	1,790	1,884	2,024	2,160	2,141	2,141	2,112	2,018	1,889	1,647	1,398
1982–3	1,103	1,208	1,305	1,587	1,713	1,700	1,842	1,600	1,552	1,546	1,411	1,408
1983–4[1]	1,261	1,453	1,661	1,919	1,907	1,583	1,520	1,380	1,210	1,012	989.6	871.1
1984–5[1]	720.5	597.2	580.1	777.1	883.6	723.9						

[1] Preliminary. *Source: Bureau of the Census*

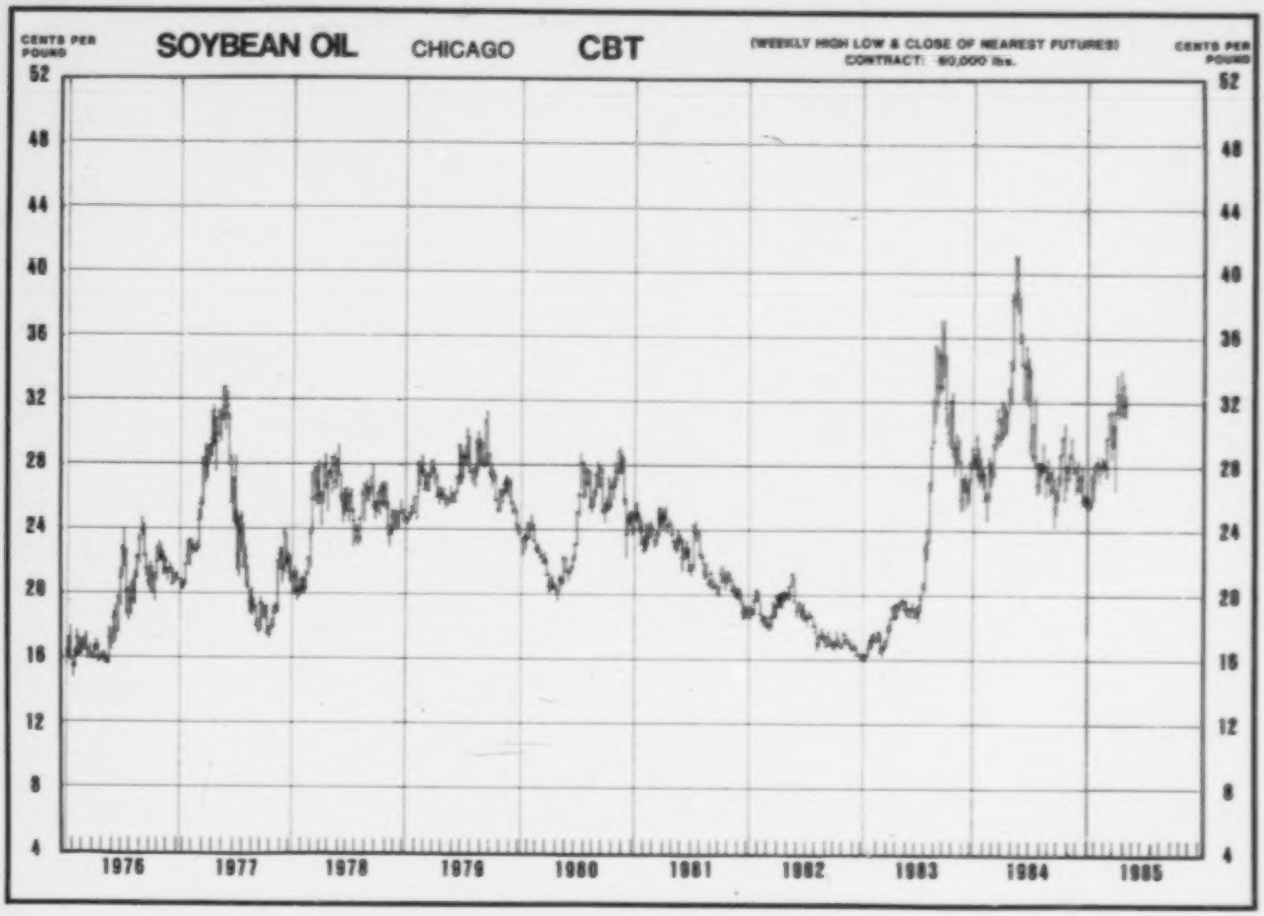
T.616

Average Prices of Crude Domestic Soybean Oil (in Tank Cars) F.O.B. Decatur In Cents per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1974–5	42.3	40.4	38.0	33.6	29.4	29.1	28.2	23.6	23.3	27.5	28.5	24.4	30.7
1975–6	21.4	18.9	16.8	16.2	16.3	16.6	16.3	15.8	17.6	20.9	20.4	22.5	18.3
1976–7	20.7	21.8	21.0	20.9	22.4	26.5	29.6	31.3	28.3	23.8	21.1	19.2	23.9
1977–8	18.8	21.0	22.6	20.9	21.6	26.6	26.8	28.8	26.9	25.9	26.3	27.8	24.5
1978–9	26.7	23.7	25.8	25.8	27.3	26.9	26.7	27.8	27.4	29.1	29.2	30.0	27.2
1979–0	27.9	27.8	26.2	23.6	23.4	22.1	20.3	20.8	21.6	26.2	25.9	26.1	24.3
1980–1	25.1	26.7	23.7	23.0	22.0	23.1	23.4	21.6	21.3	22.8	20.8	19.4	22.7
1981–2	19.7	19.9	18.9	18.4	18.2	18.5	19.7	20.6	19.4	19.0	17.9	17.4	19.0
1982–3	17.4	17.6	16.6	16.4	17.3	17.7	19.3	19.8	19.4	21.6	30.2	34.3	20.6
1983–4	30.7	28.1	27.3	28.3	27.2	30.1	32.1	39.0	36.0	30.9	29.0	28.0	30.6
1984–5	30.5	31.9	28.4	28.0	29.6	31.3							

Source: Bureau of Labor Statistics

T.620

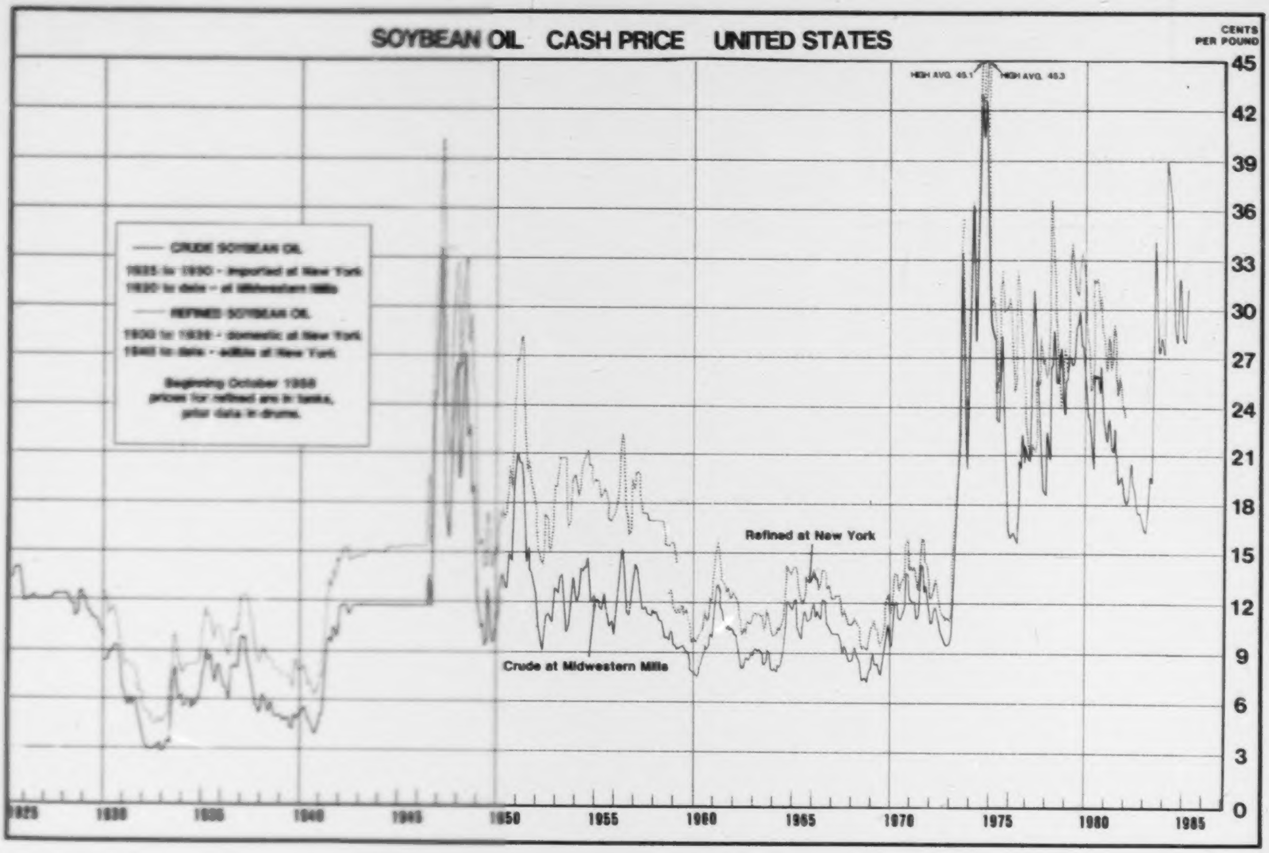


High, Low & Closing Prices of May Soybean Oil Futures on the Chicago Board of Trade ¢ per lb.

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1980	High	25.70	25.74	26.45	29.20	28.45	27.35	28.25	27.25	26.50	26.15	24.80	25.37	23.54	21.19	21.20	29.20
	Low	24.70	24.55	25.25	25.95	25.80	25.35	25.55	25.05	25.16	24.60	23.45	23.21	20.72	19.53	19.75	19.53
	Close	25.25	25.37	26.22	26.60	26.05	26.40	26.68	25.58	25.88	24.62	24.63	23.32	20.74	19.86	20.90	—
1981	High	26.15	24.00	24.05	25.65	29.40	28.55	29.70	29.20	31.45	30.75	27.35	25.55	25.40	25.51	24.05	31.45
	Low	23.60	22.35	22.35	22.80	25.45	26.50	26.80	26.81	28.25	24.25	23.40	23.60	23.50	23.60	22.61	22.35
	Close	23.60	22.37	23.38	25.62	28.30	28.05	27.21	28.28	30.70	26.00	23.57	24.84	25.15	23.84	22.85	—
1982	High	28.60	29.02	28.10	26.50	27.90	25.90	24.50	24.25	23.25	21.85	21.01	21.06	19.45	20.25	20.90	29.02
	Low	27.13	27.75	26.30	24.70	24.85	23.50	22.52	22.45	21.20	19.65	19.70	18.72	18.26	18.88	19.70	18.26
	Close	28.60	27.75	26.35	25.02	25.90	23.60	22.87	23.00	21.21	19.76	20.88	19.13	18.88	19.83	20.72	—
1983	High	—	—	22.90	21.65	20.42	19.90	19.35	18.60	18.40	17.75	17.96	18.30	18.59	19.64	19.85	22.90
	Low	—	—	21.66	20.30	19.73	18.15	18.00	17.50	17.25	16.91	16.61	16.65	16.80	18.54	18.92	16.61
	Close	—	—	21.66	20.32	19.73	18.85	18.00	17.60	17.48	16.91	17.91	16.74	18.56	19.61	19.29	—
1984	High	—	21.60	21.60	20.75	25.25	34.00	35.85	22.60	30.70	30.10	30.60	28.82	31.55	33.70	41.15	41.15
	Low	—	20.75	19.27	19.75	20.50	25.05	29.90	28.35	26.20	26.50	27.00	25.05	27.72	29.70	31.97	19.27
	Close	—	21.53	20.20	20.75	24.30	32.75	31.00	28.88	27.74	30.08	27.68	28.25	29.82	32.47	39.87	—
1985	High	—	—	29.95	30.10	27.15	27.45	26.50	25.75	26.10	25.60	27.20	27.70	30.60			
	Low	—	—	28.10	26.92	23.15	24.35	22.80	23.85	23.78	23.95	24.40	26.30	26.15			
	Close	—	—	28.88	27.92	24.35	26.70	23.80	25.07	24.55	24.61	26.67	27.26	30.52			

Source: Chicago Board of Trade

T.622



Month-End Open Interest of Soybean Oil Futures of the Chicago Board of Trade In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	40,175	44,145	49,994	49,592	55,292	52,682	52,230	49,553	50,322	60,842	57,363	54,133
1979	50,713	57,729	57,893	55,657	57,820	64,671	58,852	58,258	60,854	67,778	65,893	64,374
1980	62,515	63,472	59,707	52,805	61,089	65,949	64,710	63,908	66,723	75,815	91,407	71,527
1981	58,671	65,580	57,956	67,241	56,968	63,400	54,007	56,847	49,411	50,786	54,232	48,295
1982	53,029	53,375	49,824	53,395	57,366	58,151	56,863	50,574	44,091	41,930	45,976	50,290
1983	49,329	49,360	57,446	59,894	58,635	55,678	53,842	71,341	73,946	79,303	74,817	67,695
1984	58,227	54,536	53,081	60,190	65,570	58,857	49,323	46,848	41,617	40,386	43,856	40,264
1985	36,534	44,803	48,093									

Source: Chicago Board of Trade

T.625

Volume of Trading of Soybean Oil Futures at the Chicago Board of Trade In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	209.5	183.4	312.7	266.8	258.1	278.6	215.2	236.3	204.3	285.4	257.3	201.7	2,909
1979	215.0	291.5	233.8	254.4	212.3	321.7	313.0	252.5	262.0	311.6	222.3	191.6	3,082
1980	200.7	210.3	177.1	185.0	198.2	216.9	361.8	284.8	329.9	332.6	327.0	343.7	3,168
1981	243.8	231.1	237.9	254.0	221.7	274.8	355.1	233.7	240.2	235.0	228.1	292.1	3,047
1982	219.1	245.6	239.8	272.2	277.7	270.7	264.5	294.9	260.5	195.4	307.4	221.6	3,049
1983	273.6	244.1	264.4	273.2	233.1	288.9	332.6	452.3	445.4	378.7	355.5	316.7	3,859
1984	358.3	346.5	337.7	360.0	513.7	436.7	353.6	280.8	244.2	269.5	288.0	220.5	4,010
1985	264.2	256.0	311.6										

Source: Chicago Board of Trade

T.626

Soybeans

Soybeans continue to dominate world production of major oilseeds, but are expected to account for about 48 percent of estimated world production in the 1984/85 season compared with 52 percent as recently as the 1982/83 season. In March 1985, the Foreign Agricultural Service of the USDA estimated world oilseeds production at 186.48 million tonnes, up 12 percent from 1983/84 output which was reduced mainly by the drought-reduced 1983 U.S. soybean crop. Major oilseeds include soybeans, cottonseed, peanuts (groundnuts), sunflowerseed, rapeseed, flaxseed, copra and palm kernels. In the 1984/85 season, cottonseed was expected to account for 18 percent of total production, primarily because of the record-large Chinese crop; peanuts—11 percent; sunflowerseed—9 percent and rapeseed—9 percent.

World production of soybeans in 1984/85 was forecast by the USDA in March 1985 at 89.72 million tonnes, up 9 percent from 1983/84 production. The U.S. remained, by far, the world's largest producer of soybeans, accounting for 56 percent of estimated 1984/85 production versus 17 percent for Brazil, 11 percent for China, and 7 percent for Argentina.

The world soybean crush in 1984/85 was forecast by the USDA at 75.13 million tonnes, up 3 percent from 1983/84. The U.S. was expected to account for 37 percent of the world total versus 17 percent for Brazil, 12 percent for the EC, 5 percent for Japan, and 5 percent for Argentina.

World exports of soybeans are dominated by the U.S. which accounted for 77 percent of the total in 1983/84 versus 11 percent for Argentina and 6 percent for Brazil. World exports in 1984/85 are expected to be slightly lower than the 26.01 million tonnes of 1983/84, with the U.S. share dipping to 75 percent and the share of Argentina to 10 percent. Brazil's share of world exports is expected to increase to 8 percent.

World ending stocks for 1984/85 are expected to increase 12 percent to about 14.41 million tonnes from the relatively low level of the 1983/84 season. The U.S. is expected to hold about 42 percent of 1984/85 world ending stocks.

U.S. soybean production in 1984 was 14 percent above the 1983 crop. Both planted and harvested acres increased 6 percent and average yield per bushel was up 2.0 bushels to 28.2 bushels per acre. Total U.S. supply for the 1984/85 season ending August 31, 1985 was estimated to be about 3 percent above the 1983/84 supply of 1.98 billion bushels. The USDA, in early April 1985 estimated the 1984/85 U.S. crush at 1.02 billion bushels, up 3 percent from 1983/84 crushings of 983 million. Demand for soybeans is derived from the demand for the joint products—meal and oil. Soybeans are primarily crushed as a source of high-protein meal but the value of oil has exceeded the meal value in a few years, and accounted for an unusually large share of crushing margins in the latter part of the 1983/84 season extending well into the 1984/85 season. Soybean meal is the major high-protein meal fed to livestock in the domestic market and oil is the dominant vegetable oil used domestically in edible oil products.

The U.S. soybean industry has become increasingly dependent upon the export market. In 1983/84, 45 percent of the U.S. crop was exported versus about 37 percent in the early 1970's. The percentage of the 1984 U.S. crop to be exported in the 1984/85 season was expected to drop to about 38 percent, primarily because of competition from Brazil and also from other oilseeds such as rapeseed and sunflower seed. Ending stocks for the 1984/85 season were expected to increase by about 5 percent from the August 31, 1984 figure of 176 million bushels.

Prospective 1985-crop U.S. soybean plantings, based on a USDA report released in February 1985, totaled 64.4 million acres, down 5 percent from 1984 acreage, but 1 percent above 1983 plantings. However, planting intentions in the two leading soybean producing states, Illinois and Iowa, were off only 1 percent from a year earlier.

The USDA, in Early April 1985, estimated the 1984/85 average farm price of U.S. soybeans in a range of $5.80 to $6.00 per bushel compared with the 1983/84 season average farm price of $7.75 per bushel.

U.S. Government Support Program

The minimum support price for 1985-crop soybeans, under provisions of the 1981 Agriculture and Food Act which expires with the 1985 crops, is $5.02 per bushel for Grade No. 1 with 12.8 to 13.0 percent moisture.

Futures Markets

Soybean futures in the U.S. are currently traded on the Chicago Board of Trade (5,000 bushels) and a smaller contract (1,000 bushels) is traded on the MidAmerica Commodity Exchange in Chicago.

World Production of Soybeans In Thousands of Metric Tons

Year of Harvest[3]	Argentina	Brazil	Canada	China	Colombia	India	Indonesia	Japan	South Korea	Mexico	Romania	Paraguay	Thailand	United States	USSR	World Total
1977	2,700	9,541	580	7,300	135		523	111	319	470	191	333	90	47,947	540	72,157
1978	3,700	10,240	516	7,565	137		680	190	293	330	230	549	100	50,898	634	77,266
1979	3,600	15,156	671	7,460	154	350	653	192	257	680	383	575	102	61,722	467	93,705
1980	3,500	15,200	690	7,940	89	442	704	174	216	280	448	600	105	48,772	525	80,910
1981	4,150	12,835	607	9,325	99	467	514	212	257	680	268	600	131	54,435	450	86,020
1982	4,000	14,750	848	9,030	127	491	590	226	233	550	301	520	117	59,610	500	93,260
1983[1]	6,600	15,200	721	9,765	85	700	625	217	226	600	300	550	110	44,518	560	82,345
1984[3]	6,600	15,700	934	9,700						550		750		50,642	500	89,719

[1] Preliminary. [2] Projected. [3] Split year includes Northern Hemisphere crops harvested in the late months of the first year shown combined with Southern Hemisphere crops harvested in the early months of the following year. *Source: Foreign Agricultural Service, U.S.D.A.* T.627

SOYBEANS

U.S. Soybean Price Support Program & Official Crop Production Reports In Millions of Bushels

Year	Quantity Put Under Support	Deliveries to C.C.C.	Sept. 1 Stocks		National Avg. Support		(In Thousands of Bushels) Crop Production Reports					
			Total	Gov't. Owned	% of Parity	$ Per Bu.	August 1	September 1	October 1	November 1	December 1	Final
1972	90.6	[2]	72.0	1.5	54	2.25	1,269,616	1,286,015	1,317,090	1,350,517	1,276,290	1,270,608
1973	124.2	[2]	59.6	—	45	2.25	1,539,771	1,598,746	1,588,361	1,574,586	1,566,518	1,547,543
1974	34.6	—	170.8	—	37	2.25	1,314,232	1,315,792	1,262,352	1,243,912	1,233,425	1,216,287
1975	—	—	188.2	.4	—None—		1,457,672	1,442,422	1,473,782	1,519,882	1,521,370	1,548,344
1976	22.5	—	244.9	—	34	2.50	1,344,343	1,274,263	1,249,713	1,252,148	1,287,560	1,288,608
1977	97.5	—	102.9	—	46	3.50	1,602,065	1,644,220	1,647,315	1,682,705	1,761,755	1,767,267
1978	64.2	—	161.0	—	51	4.50	1,765,024	1,772,364	1,792,064	1,810,389	1,870,181	1,868,754
1979	120.0	—	174.1	—	45	4.50	2,129,254	2,174,179	2,213,289	2,235,869	2,267,647	2,260,655
1980	—	—	358.5	—	43	5.02	1,880,342	1,831,172	1,757,272	1,774,742	1,817,097	1,797,543
1981	—	—	313.0	—	40	5.02	2,017,468	2,089,418	2,106,568	2,076,998	2,030,452	1,989,110
1982	—	—	254.5	—	39	5.02	2,293,420	2,313,880	2,300,345	2,299,520	2,276,976	2,190,297
1983[1]			344.6	—		5.02	1,843,459	1,534,969	1,517,019	1,536,519	1,595,437	1,635,772
1984[1]			175.7	—		5.02	2,035,370	2,027,565	1,971,700	1,901,565	1,860,783	
1985[1]						5.02						

[1] Preliminary. [2] Less than 50,000 bushels. *Source: Crop Reporting Board, U.S.D.A.* T.628

Soybean Stocks in the United States In Thousands of Bushels

Year	On Farms				Off Farms				Total Stocks			
	Jan. 1	April 1	June 1[2]	Sept. 1	Jan. 1	April 1	June 1[2]	Sept. 1	Jan. 1	April 1	June 1[2]	Sept. 1
1972	397,605	218,609	58,438	11,779	491,387	333,677	174,394	60,183	888,992	552,286	232,832	71,962
1973	429,071	145,333	33,855	9,415	437,924	358,372	145,352	50,222	866,995	503,705	179,207	59,637
1974	608,160	331,885	151,104	64,545	552,756	405,943	190,865	106,337	1,160,916	737,828	341,969	170,882
1975	483,869	331,241	165,324	75,114	505,392	323,317	191,704	109,922	989,261	654,558	357,028	185,036
1976	590,466	411,366	253,963	86,150	665,689	456,283	300,938	158,781	1,256,155	867,649	554,901	244,931
1977	473,120	227,723	92,374	32,748	559,045	390,214	243,335	70,168	1,032,165	617,937	335,709	102,916
1978	672,861	393,684	207,102	59,000	652,400	455,448	298,815	102,044	1,325,261	849,132	505,917	161,044
1979	699,556	412,570	241,255	61,509	692,534	467,646	284,850	112,579	1,392,090	880,216	526,105	174,088
1980	890,091	600,648	396,040	128,596	877,896	580,322	378,144	229,880	1,767,987	1,180,970	774,184	358,476
1981	732,384	527,222	363,317	153,571	792,792	493,892	317,603	159,436	1,525,176	1,021,114	680,920	313,007
1982	882,826	565,792	354,097	117,749	727,478	460,128	292,268	136,732	1,610,304	1,025,920	646,365	254,481
1983	1,008,139	643,134	424,658	118,574	754,560	504,529	365,966	226,060	1,762,699	1,147,663	790,624	344,634
1984[1]	620,171	333,636	164,382	68,274	670,384	415,765	292,085	106,524	1,290,555	749,401	471,686	175,696
1985[1]	767,084				655,672				1,422,756			

[1] Preliminary. [2] Data prior to 1976 are AS OF JULY 1. *Source: Crop Reporting Board, U.S.D.A.* T.629

U.S. Commercial Stocks of Soybeans on the First of the Month In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	41.8	37.7	41.1	49.0	48.4	36.1	27.1	18.8	13.6	7.0	25.0	32.0
1973	39.1	32.0	56.8	59.7	48.9	31.8	22.8	16.6	12.1	10.5	30.4	35.6
1974	33.6	32.0	35.3	36.2	27.3	21.2	21.2	20.3	18.0	14.3	51.6	55.4
1975	48.1	43.3	40.5	31.1	18.0	12.8	16.6	13.0	12.6	14.2	60.2	62.5
1976	52.0	55.7	57.1	51.7	42.5	37.0	32.5	30.4	21.3	27.9	54.4	52.2
1977	46.8	49.5	51.1	52.3	55.4	50.0	38.7	19.6	8.5	10.9	43.6	50.9
1978	46.2	44.3	41.8	49.1	47.9	42.7	30.6	23.0	10.7	13.0	58.3	63.2
1979	60.9	57.6	62.0	60.8	52.5	40.7	37.6	31.2	19.3	11.5	77.6	84.9
1980	76.5	71.5	73.2	72.3	56.5	52.6	53.2	51.8	44.8	51.5	80.6	79.5
1981	73.1	71.1	69.0	53.1	45.3	35.7	24.7	19.0	11.2	12.6	40.7	51.7
1982	50.6	50.4	41.1	39.9	34.7	67.4	21.5	18.4	11.5	12.8	43.9	53.5
1983	53.6	58.2	57.5	55.7	55.9	44.7	34.9	35.8	42.5	47.0	78.8	83.0
1984	77.2	74.4	65.2	58.6	49.2	41.1	35.4	20.8	7.9	6.7	23.3	41.7
1985	41.1	44.0	38.2	33.3								

Source: Foreign Agricultural Service, U.S.D.A. T.630

Salient Statistics of Soybeans in the United States

Crop Year	Planted Alone — 1,000 Acres —	Acreage Harvested — 1,000 Acres —	Yield Per Acre (Bus.)	Farm Price ($ Bu.)	Farm Value (Million Dollars)	Pounds Per Bushel Crushed		U.S. Exports of Soybeans Crop Year (Sept.-Aug.) (Ths. Metric Tons[2])								
						Yield of Oil	Yield of Meal	Grand Total	Bel.-Luxem.	Denmark	Canada	W. Germany	Japan	Netherlands	Taiwan	U.S.S.R.
1972–3	46,885	45,683	27.8	4.37	5,550	10.59	47.04	479.4	8.2	17.4	22.1	54.7	121.0	84.3	19.6	31.5
1973–4	56,675	55,667	27.8	5.68	8,790	10.76	47.18	539.1	13.2	12.5	37.9	72.9	98.8	101.1	20.5	.7
1974–5	53,507	51,341	23.7	6.64	8,079	10.51	47.48	420.7	5.6	5.9	26.9	51.0	96.9	77.7	24.4	0
1975–6	54,550	53,617	28.9	4.92	7,622	10.94	47.27	555.1	17.7	15.1	28.0	45.6	118.1	130.5	32.8	11.4
1976–7[2]	50,226	49,401	26.1	6.81	8,776	11.09	47.81	15,351	411	306	462	1,520	3,219	3,007	697	825
1977–8	58,760	57,830	30.6	5.88	10,383	10.39	47.34	19,061	475	423	264	1,521	3,636	4,086	854	744
1978–9	64,708	63,663	29.4	6.66	12,450	11.07	47.63	20,117	420	341	352	1,486	3,865	4,012	1,271	1,178
1979–0	71,632	70,343	32.1	6.28	14,250	10.74	48.01	23,818	584	342	392	1,318	3,868	6,035	780	813
1980–1	70,037	67,813	26.5	7.57	13,560	11.08	47.93	19,712	670	156	345	1,791	3,816	3,839	1,063	
1981–2	67,810	66,163	30.1	6.04	12,071	10.70	47.85	25,285	1,404	167	310	2,135	4,196	5,349	1,059	683
1982–3	70,884	69,442	31.5	5.65	12,594	10.75	47.61	24,634	1,259	160	324	1,813	4,580	4,648	1,300	199
1983–4[1]	63,779	62,525	26.2	7.75	12,679	11.26	47.36	20,148	882	113	248	967	4,394	2,988	1,382	408
1984–5[3]	67,735	66,093	28.2	6.00	11,166			23,000								
1985–6[3]	64,360															

[1] Preliminary. [2] Data prior to 1976–7 are in MILLIONS OF BUSHELS. [3] Forecast. *Source: Crop Reporting Board, U.S.D.A.* T.631

Supply and Distribution of Soybeans in the United States In Millions of Bushels

Crop Year Begin. Sept. 1	Supply					Distribution					
	Stocks, Sept. 1										
	Farms	Mills, Elevators[2]	Total	Production	Total Supply	Crushings	Exports	Seed	Feed	Residual	Total Distribution
1972–3	11.8	60.2	72.0	1,270.6	1,342.6	721.8	479.4	60.8	1.1	19.8	1,282.9
1973–4	9.4	50.2	59.6	1,547.5	1,607.1	821.3	539.1	56.1	1.2	18.7	1,436.4
1974–5	64.5	106.3	170.9	1,216.3	1,387.2	701.3	420.7	57.2	1.0	21.7	1,198.9
1975–6	75.1	109.9	188.2	1,548.3	1,736.5	865.1	555.1	53.5	1.2	15.7	1,490.6
1976–7	86.2	158.8	244.9	1,288.6	1,533.5	790.2	564.1	61.0	1.0	13.3	1,429.6
1977–8	32.7	70.2	102.9	1,767.3	1,870.2	926.7	700.5	68.0	1.0	13.0	1,703.6
1978–9	59.0	102.0	161.0	1,868.8	2,029.8	1,018	739.0	75.0	1.0	23.0	1,856.0
1979–0	61.5	112.6	174.1	2,260.7	2,437	1,123	875.0		81		2,079
1980–1	128.6	229.9	358.5	1,797.5	2,156	1,020	724.0		99		1,843
1981–2	153.6	159.4	313.0	1,989.1	2,302	1,030	929.0		89		2,048
1982–3	117.7	136.7	254.5	2,190.3	2,444	1,108	905		86		2,099
1983–4[1]	118.6	226.1	344.6	1,635.8	1,981	983	740		83		1,806
1984–5[3]	68.3	106.5	175.7	1,860.8	2,037	1,000	810		87		1,897
1985–6											

[1] Preliminary. [2] Also warehouses. [3] Estimates. *Source: Economic Research Service, U.S.D.A.* T.632

Production of Soybeans for Beans in the U.S., by Selected States In Millions of Bushels

Year	Ark.	So. Car.	Ill.	Ind.	Iowa	La.	Mich.	Minn.	Miss.	Mo.	N. Car.	Ohio	Tenn.	Nebr.	Ky.
1972	81.0	20.0	259.4	108.8	216.0	38.3	13.6	90.3	48.0	108.9	29.1	79.8	28.6	23.0	23.6
1973	116.3	23.0	281.3	135.1	263.5	34.8	16.6	127.3	60.5	126.9	34.8	89.8	36.9	36.3	26.0
1974	81.7	24.0	202.6	97.3	199.1	44.0	13.2	84.0	46.3	93.5	30.5	79.8	31.9	28.2	25.0
1975	117.5	30.4	299.5	121.6	237.0	48.0	15.9	98.6	70.2	113.6	33.4	102.3	46.3	32.4	29.7
1976	82.1	21.4	249.5	111.5	200.0	63.0	11.6	66.4	71.5	84.0	24.6	95.0	40.5	19.6	28.9
1977	105.8	26.7	336.3	144.3	251.3	63.0	21.6	133.8	78.5	148.8	29.0	120.0	52.2	40.7	40.9
1978	115.2	32.3	309.5	144.2	283.1	76.0	21.6	146.2	81.7	155.0	40.3	127.7	56.9	42.5	40.8
1979	144.2	39.8	379.1	159.1	306.4	93.8	30.3	162.6	118.9	183.6	45.8	144.8	70.7	54.7	54.0
1980	65.3	20.8	309.9	157.7	318.4	67.0	30.4	149.9	61.6	135.5	34.7	135.4	45.9	53.1	36.0
1981	99.0	31.0	351.5	151.8	326.0	64.2	29.1	139.2	75.6	155.6	46.3	99.8	61.1	78.7	47.9
1982	105.6	39.6	354.2	173.3	306.6	75.4	35.3	169.1	92.3	171.0	52.5	133.2	61.0	78.8	51.3
1983	70.3	23.6	267.0	122.5	278.6	68.1	33.8	151.8	58.9	103.0	33.0	105.0	31.5	59.0	24.5
1984[1]	101.4	29.8	288.6	150.1	264.6	64.3	32.1	172.9	76.8	108.7	46.5	137.6	48.1	63.8	42.3
1985															

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.633

SOYBEANS

High, Low & Closing Prices of May Soybean Futures at the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1980	High	744½	747	760	859	823	773	790	788	739½	726½	704	710½	669½	611	624	859
	Low	735	719½	734	749	730½	720	729½	695	702	686½	653	656½	582½	569½	589½	569½
	Close	737½	739¾	756	764	738¾	757¾	762½	709¾	723¼	687¼	695½	657½	583	594½	612	—
1981	High	741½	713½	710	750	859	855½	933	997½	1,006	1,001	882	798½	788½	812½	785	1,006
	Low	696½	681	684	680	744	783	842	847½	937	765½	735	754½	719½	757½	733	680
	Close	699	692	695¾	750	822	854½	873¼	966½	997½	843½	751½	761	783½	778½	741	—
1982	High	894	922	883	832½	853½	807	751	739	721	696¼	677	683	642	670¾	669½	922½
	Low	859	872	820	772	787	722	703½	705	670	619	637	617½	605½	639½	647	605
	Close	888½	873	829	788½	812½	730	715¼	714¼	678¼	641¼	674½	632¾	640	651¾	666	—
1983	High	713	729½	723½	704½	678½	664½	611½	588	607¾	595½	620	622	643¾	655½	643	746
	Low	667½	698	687½	670	651	593½	572½	558½	570½	576¼	577	572½	577½	620¼	610¼	558½
	Close	696	716½	687½	671	654¾	601	574¼	568¼	594	581¾	618½	575½	637	640¼	621½	—
1984	High	718	732	720	678	794	984	996	927	903½	853	825	768	815	813	894	996
	Low	645	695½	659	630	657½	760	859½	831	791	775½	738	706	762	765	768½	630
	Close	714	719	659½	660	761	930	890	851	822	843½	747½	765	789	771	888	—
1985	High	773	777	784	797	764	700	675	678	676½	640½	624	619½	614			
	Low	753	737	744½	736	940	643½	601	623	623	597¼	581¾	572	570¾			
	Close	768½	737	777	761	646½	675	627	659¾	634¼	599	613¼	573	605½			
1986	High	645															
	Low	608½															
	Close	643½															

Source: Chicago Board of Trade

T.634

Soybean Stocks at U.S. Mills on First of Month In Millions of Bushels

Crop Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1973–4	30.7	13.5	89.5	125.8	115.8	119.0	123.0	112.3	95.5	81.5	66.5	57.0
1974–5	41.6	23.0	93.9	123.0	102.5	83.2	79.2	65.3	55.4	44.3	37.7	35.4
1975–6	27.4	26.8	116.6	137.2	131.5	121.1	109.8	101.3	92.8	79.4	80.5	66.3
1976–7	48.7	63.0	127.5	159.8	154.2	147.5	146.5	140.3	126.8	108.6	83.4	50.9
1977–8	23.4	20.3	101.5	123.9	113.0	94.4	87.3	102.8	90.2	76.3	54.5	44.6
1978–9	37.9	31.9	138.4	149.4	127.3	112.4	124.0	120.9	96.7	71.1	73.0	55.6
1979–0	37.5	39.2	166.5	184.5	163.3	145.4	130.7	118.6	95.8	79.7	75.7	73.9
1980–1	56.9	80.4	166.0	172.0	138.7	125.9	105.4	97.2	84.4	67.8	49.2	43.9
1981–2	33.4	31.5	105.8	135.2	114.5	99.8	84.6	79.2	72.2	60.8	51.2	43.6
1982–3	30.0	29.0	114.2	145.5	125.1	116.2	98.5	96.2	84.6	69.8	62.0	55.4
1983–4	58.6	63.9	124.5	142.3	124.0	125.3	114.8	105.3	94.2	101.7	83.4	57.7
1984–5	35.3	19.7	53.9	116.4	98.4	85.9	65.9					

Sources: Economic Research Service, U.S.D.A.

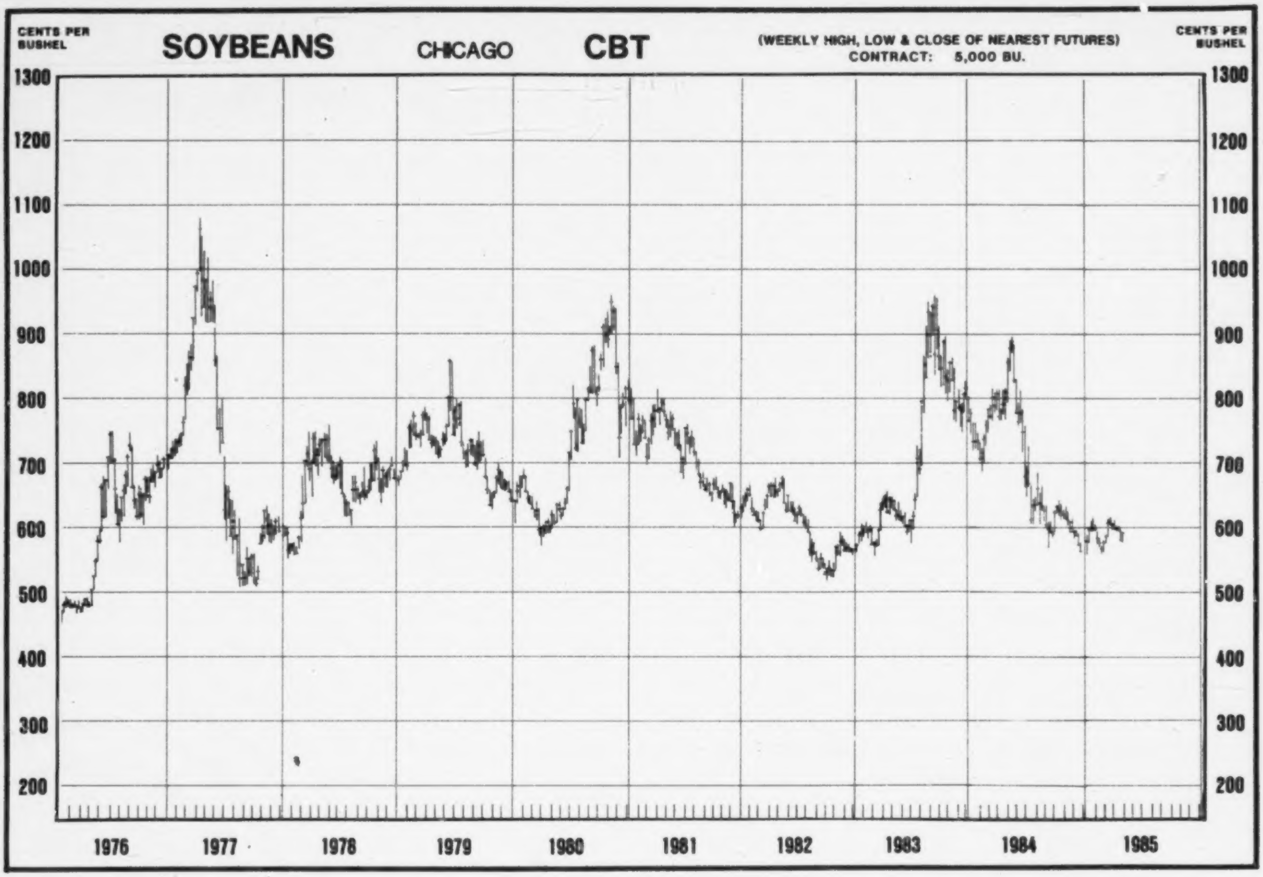
T.635

Soybean Exports from the United States In Millions of Bushels

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1972–3	15.0	54.3	61.2	49.7	47.1	54.7	59.1	45.5	41.0	26.5	14.2	11.0	479.4
1973–4	7.5	46.6	74.4	58.0	48.3	56.4	57.9	62.0	43.5	36.1	27.1	21.2	539.1
1974–5	22.9	32.2	63.2	41.4	50.0	33.3	38.4	35.8	25.1	14.0	31.0	33.4	420.7
1975–6	24.3	62.7	61.5	49.6	51.8	52.2	52.3	50.5	49.5	47.2	29.2	24.3	555.1
1976–7	22.2	60.1	67.4	56.7	50.9	59.9	58.4	57.0	55.1	31.0	27.2	18.1	564.1
1977–8	15.0	77.6	87.7	57.0	52.6	54.4	66.6	72.7	79.3	63.4	34.7	39.3	700.5
1978–9	38.0	87.6	101.7	70.6	77.0	53.2	83.5	67.7	46.8	40.9	32.7	39.7	739.2
1979–0	40.9	88.9	118.1	78.3	85.8	73.0	69.4	81.3	74.2	58.7	49.1	57.7	875.2
1980–1	41.4	60.3	75.0	74.5	71.7	55.5	103.2	60.0	69.6	41.8	29.6	41.8	724.3
1981–2	50.9	100.8	103.7	73.6	84.3	89.4	79.0	85.7	90.6	59.8	53.8	57.5	929.1
1982–3	58.0	94.4	93.6	90.1	86.3	87.2	84.4	73.3	58.5	67.7	51.6	60.2	905.2
1983–4[1]	53.9	67.6	69.2	74.5	80.4	79.7	78.8	68.5	56.8	41.1	39.2	30.7	686.6
1984–5													

[1] Preliminary. *Source: Bureau of the Census*

T.636



Month End Open Interest of Soybean Futures at Chicago Board of Trade In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	470.3	438.0	499.4	483.9	553.5	491.8	452.8	485.8	562.2	726.6	720.1	775.1
1979	613.9	719.0	642.0	576.1	562.2	584.4	514.4	477.1	534.9	564.7	630.4	704.3
1980	533.2	540.0	502.2	449.6	513.5	615.0	703.5	784.4	880.4	1,069.6	1,102.7	1,056.4
1981	645.7	586.9	565.0	551.4	523.3	513.6	470.3	455.7	449.1	523.2	491.4	426.6
1982	400.8	391.6	435.2	422.1	399.1	377.0	400.2	353.7	357.7	422.9	433.3	424.7
1983	465.3	413.9	485.7	507.5	428.5	401.2	547.5	714.3	745.7	684.1	648.2	603.2
1984	548.3	548.9	556.2	494.5	577.1	428.7	316.2	275.1	287.0	339.4	351.2	343.2
1985	359.5	359.2	327.9									

Source: Chicago Board of Trade T.642

Volume of Trading in Soybean Futures at the Chicago Board of Trade[1] In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	2,978	2,224	5,057	4, 121	3,820	3,742	2,662	2,965	2,561	4,754	3,992	3,511	42,386
1979	3,701	5,038	4,123	3,856	3,686	5,485	4,184	2,843	2,920	3,946	3,115	2,674	45,572
1980	3,222	2,916	2,808	3,035	2,911	3,602	6,803	5,226	6,562	7,706	7,025	7,024	58,841
1981	5,808	4,074	4,796	4,585	3,917	4,737	4,821	3,897	3,626	4,087	3,765	4,337	52,450
1982	3,120	3,497	4,478	4,484	3,517	4,245	4,017	3,822	3,197	4,014	4,282	3,198	45,828
1983	3,942	3,820	4,247	4,375	4,259	4,409	6,224	8,799	7,852	8,071	6,793	5,609	68,402
1984	5,550	5,247	6,008	4,945	7,300	6,323	5,314	4,045	2,505	3,687	3,427	2,463	56,813
1985	3,315	2,749	2,657										

[1] Trading on this market represents approximately 98% to 99% of all trading in Soybeans. [2] Preliminary. *Source: Commodity Futures Trading Commission* T.638

SOYBEANS

Soybeans Under Price Support Through the End of the Month (Cumulative Total from Current Season's Crop) In Thousands of Bushels

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1972–3	58	21,067	56,609	75,190	86,803	89,338	90,368	90,546	90,561	90,560	—	—	
1973–4	171	11,009	75,213	101,310	120,240	122,752	123,613	124,067	124,170	124,188	—	—	
1974–5	121	3,868	13,186	19,410	22,426	23,275	23,828	34,217	34,543	34,574	—	—	
1975–6	—No Program—												
1976–7	270	3,398	8,471	13,398	14,966	15,253	15,433	22,450	22,491	22,491	—	—	
1977–8	360	13,135	47,879	68,269	89,128	93,293	96,234	96,808	97,048	97,146	—	—	
1978–9	0	6,403	31,008	43,015	58,278	61,489	62,365	63,146	63,508	65,087	—	—	
1979–0	11	9,507	39,559	67,372	101,052	106,135	113,638	119,860	121,684	122,013	—	—	
1980–1	22	11,705	28,541	67,744	100,809	116,167	125,480	130,236	132,346	133,160	—	—	
1981–2	1,044	26,019	81,377	138,202	191,386	208,285	216,412	219,743	144,165	221,303			
1982–3	861	50,145	203,031	311,105	363,696	382,536	391,432	393,567	394,727	395,893			
1983–4	0	9,098	32,869	62,736	84,526	92,974	98,945	100,030	100,656	100,817			
1984–5	0	46,349	99,437	174,002	242,526	258,174							
1985–6													

Source: U.S. Department of Agriculture T.639

Soybean Receipts at Primary Markets in the United States In Thousands of Bushels

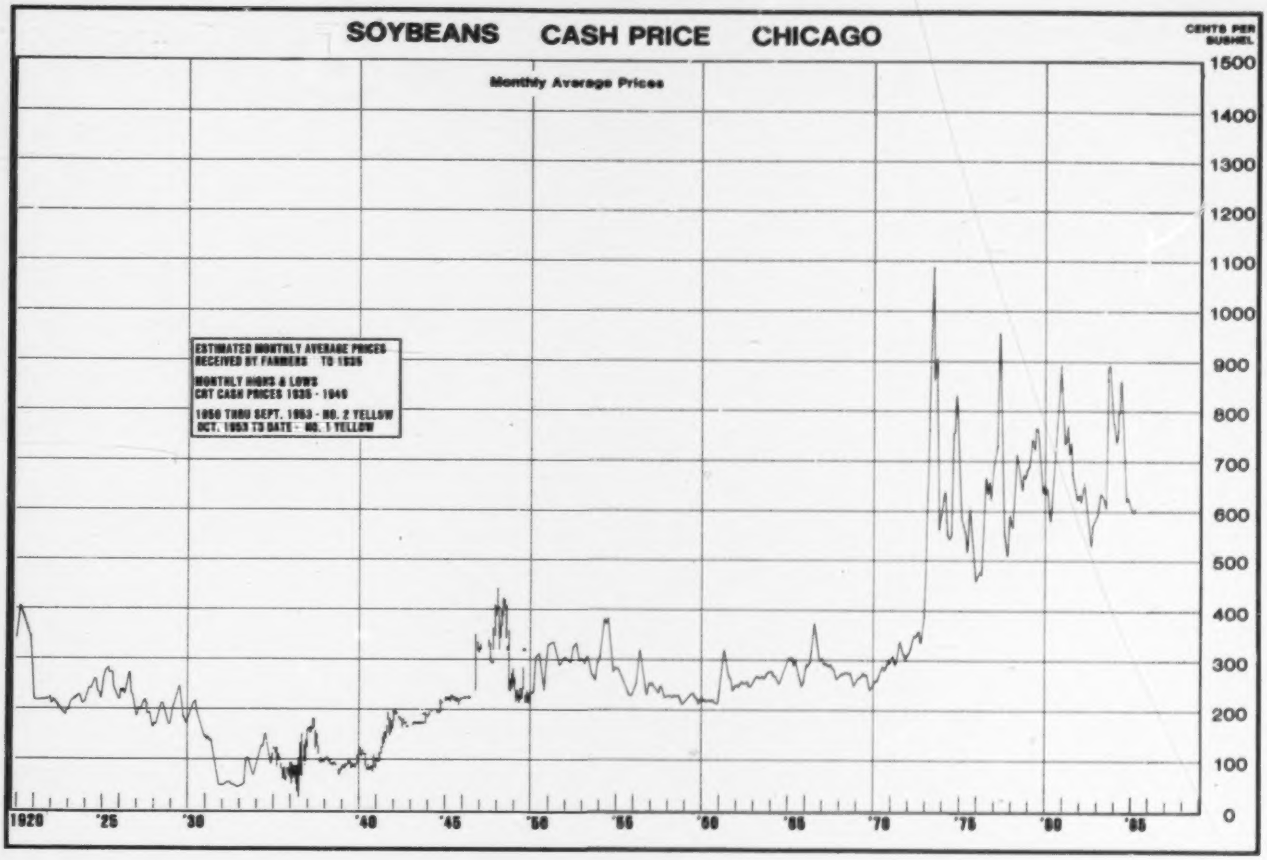
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	2,565	3,904	5,111	3,516	2,023	2,426	2,729	3,859	1,297	17,623	11,080	12,886	69,019
1973	13,106	8,779	6,776	4,267	5,717	3,331	3,354	2,059	1,077	14,946	13,330	3,976	80,718
1974	4,596	5,647	5,712	5,051	5,224	3,964	7,159	4,557	2,348	18,486	7,795	3,070	74,065
1975	1,969	1,390	1,865	1,823	1,843	2,665	4,505	3,066	2,131	25,944	5,988	2,049	55,238
1976	2,449	2,337	3,002	2,146	2,228	3,715	3,640	1,280	3,374	13,927	4,533	1,933	44,564
1977	3,335	3,337	4,736	4,075	6,824	781	152	1,980	1,208	11,960	7,986	4,023	50,397
1978	2,575	1,933	3,346	4,494	7,588	3,986	1,780	3,803	2,856	17,056	8,468	2,353	60,238
1979	2,718	4,007	2,938	2,916	2,669	3,545	2,370	2,034	2,375	20,795	9,360	3,138	58,965
1980	2,994	4,404	3,445	5,987	7,339	11,406	6,950	4,524	8,222	31,589	9,752	3,849	100,461
1981	4,419	3,395	3,485	4,986	3,918	4,616	3,573	3,735	7,694	21,027	13,882	5,596	80,236
1982	3,265	5,137	4,278	8,354	7,149	4,521	4,123	4,666	8,328	26,088	9,032	4,412	89,353
1983													

Source: Chicago Board of Trade T.640

Soybeans Crushed (Factory Consumption) in the U.S. In Millions of Bushels—One Bushel = 60 Pounds

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1972–3	52.2	66.8	70.7	69.2	70.6	64.8	64.4	58.2	61.7	52.2	44.5	46.5	721.8
1973–4	41.4	62.8	71.8	72.8	74.7	70.4	75.8	69.6	71.7	69.4	72.2	68.8	821.3
1974–5	53.6	61.6	60.8	60.2	63.1	54.1	61.0	57.5	53.0	53.1	59.2	64.0	701.3
1975–6	56.5	71.4	71.1	77.8	74.9	69.3	77.9	77.2	79.6	74.6	70.6	64.2	865.1
1976–7	68.8	72.9	73.4	72.7	72.2	71.6	74.4	67.1	61.2	56.2	50.6	49.1	790.2
1977–8	51.9	75.8	85.3	86.6	85.3	75.4	86.5	80.1	82.7	72.4	70.8	73.9	926.7
1978–9	71.4	89.3	89.6	96.4	90.6	81.5	89.0	83.3	86.9	82.8	80.6	76.4	1,018
1979–0	75.9	95.8	101.4	104.4	106.6	100.0	102.2	92.0	93.8	82.7	84.9	83.7	1,123
1980–1	81.0	97.8	98.5	94.1	92.2	79.6	88.7	85.4	82.3	73.4	72.3	74.6	1,020
1981–2	75.4	104.5	97.6	102.5	94.9	86.7	85.1	81.0	86.6	77.1	70.6	67.8	1,030
1982–3	76.0	100.2	108.1	111.9	110.0	93.0	94,6	81.8	83.7	81.5	81.6	85.7	1,108
1983–4[1]	86.6	96.4	86.6	89.4	93.8	79.2	86.0	74.6	79.4	70.6	69.0	71.1	982.7
1984–5[1]	65.6	89.2	99.0	101.1	94.5	80.8							
1985–6													

[1] Preliminary. *Source: Bureau of the Census* T.641



Average Cash Price of No. 1 Yellow Soybeans at Illinois Processor In Cents per Bushel

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1976-7	622	655	686	706	726	825	960	942	825	640	549	516	721
1977-8	507	584	594	573	565	658	681	701	676	662	647	642	624
1978-9	672	668	681	689	728	745	727	721	768	764	728	704	716
1979-0	656	652	653	636	642	607	580	604	610	722	745	813	660
1980-1	827	891	773	757	734	737	772	758	713	736	694	644	753
1981-2	630	628	623	630	624	616	642	656	631	620	573	540	618
1982-3	526	570	573	581	586	598	635	627	606	659	846	893	640
1983-4	846	820	777	767	737	797	798	861	791	685	663	621	764
1984-5	627	625	607	604	597								

Source: Consumer & Marketing Service, U.S.D.A. T.643

Average Price Received by Farmers for Soybeans in the U.S. In Cents Per Bushel

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
1976-77	665	590	611	656	681	706	783	905	924	813	652	548	681
1977-78	517	528	561	568	575	553	620	649	477	669	640	621	588
1978-79	620	626	641	649	658	699	716	706	706	736	736	707	666
1979-80	681	635	630	627	639	620	594	563	576	591	675	718	628
1980-81	759	768	818	780	780	750	759	760	740	705	713	671	757
1981-82	621	606	603	600	613	604	604	617	627	612	599	559	604
1982-83	522	506	534	546	556	566	582	609	606	590	627	757	565
1983-84	828	796	780	774	785	728	768	783	812	799	695	650	775
1984-5	609	608	602	582	590	575	578						

Source: Crop Reporting Board T.637

Stock Index Futures

Wide swings in stock index futures in 1984 were influenced by shifting perceptions of the pace of economic recovery during the year. During the first half of 1984, the economic expansion that began in 1982 gained significant momentum and showed unusual strength. The U.S. economy during the first half of the year was characterized by a slowdown in the inflation rate to nearly 4 percent, a further decline in the unemployment rate to 7.5 percent, a gain in industrial production of about 9.5 percent from the low point of the recession in the second half of 1982, and a rise of 22 percent in fixed business investment.

At the same time, however, stock index futures exhibited severe weakness due to the influence of several adverse factors. Preliminary estimates for the third quarter of 1984 were for only 2.7 percent growth at an annual rate, indicating that the economic expansion was moderating. Rising interest rates, as reflected by slumping interest rate futures during the first part of 1984, tended to lessen the demand for stocks by making it more costly for large traders to carry securities positions on margin. At the same time, the unusual strength of the dollar on foreign exchange markets adversely affected the earnings of large U.S. overseas corporations and other multi-national companies whose stocks were traded in the U.S. Another side effect of the dollar's strength was to decrease the flow of foreign capital into U.S. securities exchanges, and, at the same time, to encourage U.S. investments in foreign securities.

The moderating of economic expansion in the second half of 1984 was also signaled by a decline in the index of leading indicators for two consecutive months (July and August), a significant drop in housing starts (which had begun to slacken in the spring of 1984), and a weakening of manufacturers' orders. The slowdown was attributed to some leveling of consumer spending and to a tempering of business investment as well as to rising interest rates.

Then, in mid-1984, an expansion of credit by the Federal Reserve and a consequent sharp drop in interest rates ignited a swift recovery in the stock market that sent most spot stock indices and stock index futures markets upward to new all-time highs. This development was justified by expectations that the economic recovery would continue throughout the remainder of the year—albeit at a somewhat slower pace. Restrained wage settlements, additional productivity advances, and low inflationary expectations provided a basis for optimism. Also, the persistent record strength of the dollar brought some constructive influences to bear on stock index futures. Besides keeping inflation in check, the soaring dollar helped to foster foreign competition that, in turn, encouraged greater attention to the unit-cost implications of wage bargains and also encouraged producers to find ways to enhance productivity and profitability. This was reflected in an improvement of labor-management relations, by the modernization of aging facilities, and by a greater resorting to modern technology.

Official projections for U.S. industry in 1985 were based on the assumption that macroeconomic growth would moderate in that year. Real GNP was projected as growing at an annual rate of 4.3 percent compared with 7.3 percent for 1984. The inflation rate as measured by the GNP deflator was expected to continue roughly even with 1984 levels at 4.5 percent. Wage increases were expected to be about 4 percent in 1985, and productivity growth was expected to slow about 1.5 percent by the end of the year. The civilian unemployment rate was projected as falling to 7 percent in 1985 from 7.4 percent in 1984. Official projections also assumed that Federal Reserve monetary policy would tend to be accommodative in 1985.

This outlook for a continuation of economic growth was perhaps reflected in a second leg of the mid-1984 bull market in stock index futures that sent most markets into new high ground once again by the end of 1984. The fact that the projected 1985 economic expansion may be moderate compared to 1984 growth levels may dispel any conjecture about "overheating," thus giving the Fed leeway to keep interest rates relatively easy during the year. These considerations of continued economic growth and a possibly accommodative Fed monetary policy favored continued firm stock index futures markets into 1985.

Futures Markets

Value Line and Mini Value Line futures are traded on the Kansas City Board of Trade. S&P 500 and S&P 100 Index futures are traded on the Chicago Mercantile Exchange. Futures based on the New York Stock Exchange Composite Index are traded on the New York Futures Exchange. In 1984, trading of futures contracts based on the Major Market Index began at the Chicago Board of Trade.

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High, Low & Closing Prices of the December S&P 500 Stock Index Futures at Chi. IOM

Year of Delivery		Yr. Prior to Del.	Delivery Year												Life of Delivery Range
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1982	High	Futures Trading				124.20	121.90	113.85	115.90	120.30	127.65	143.00	146.80	145.70	146.80
	Low	Began				117.80	111.80	104.35	106.80	101.40	116.95	118.55	131.40	134.75	101.40
	Close	April 21, 1982				120.60	112.05	111.85	107.90	119.45	119.35	134.55	138.65	135.30	—
1983	High	147.20	152.60	156.50	158.00	166.70	170.70	175.05	173.70	167.50	172.60	174.25	169.70	167.55	175.05
	Low	138.00	140.60	144.75	151.10	151.90	162.50	161.90	168.85	160.65	165.50	164.15	164.20	161.75	138.0
	Close	143.00	149.20	152.40	154.05	166.40	164.30	171.35	165.00	165.95	168.25	165.45	166.50	161.75	—
1984	High	175.00	177.30	171.50	166.75	166.20	167.70	160.55	158.90	173.95	174.60	174.40	172.90	169.50	179.20
	Low	169.95	170.65	158.60	154.60	159.70	153.90	153.95	150.70	155.40	166.30	162.75	163.90	161.55	150.70
	Close	173.85	171.00	162.50	165.35	166.00	155.60	157.35	154.90	170.20	170.10	168.60	164.55	165.51	—
1985	High	181.05	191.25	194.90	196.50										
	Low	178.40	175.40	188.75	187.00										
	Close	178.40	189.75	193.55	190.20										

High, Low & Closing Prices of the December NYSE Composite Stock Index Futures at New York

Year of Delivery		Yr. Prior to Delivery		Delivery Year												Life of Delivery Range
		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1982	High	Futures Trading						70.55	65.35	66.85	69.10	73.50	82.10	84.45	83.95	84.45
	Low	Began						64.65	60.20	61.45	58.10	67.20	68.15	76.10	77.70	58.10
	Close	May 6, 1982						64.60	64.30	62.05	68.45	68.45	77.55	81.65	81.30	—
1983	High	85.70	85.35	88.20	90.25	91.00	95.90	98.25	101.45	100.75	96.80	99.85	100.50	97.75	96.90	101.45
	Low	78.80	80.20	81.50	83.80	87.00	87.65	93.65	94.30	95.00	92.70	95.50	94.65	94.10	93.80	60.25
	Close	84.00	83.30	86.70	88.05	88.65	95.75	95.65	99.35	95.55	95.80	97.30	95.45	96.30	94.95	—
1984	High	102.25	101.15	102.65	99.30	95.90	95.45	96.20	92.55	91.50	100.40	100.85	100.90	99.85	97.90	103.55
	Low	98.25	98.50	98.70	91.00	91.90	91.80	88.55	88.80	86.70	89.35	95.85	93.80	94.45	93.20	86.70
	Close	100.95	99.85	99.00	93.90	95.15	95.35	89.55	90.70	89.00	98.30	98.05	97.40	94.90	95.56	—
1985	High	—	104.15	110.90	112.95	113.75										
	Low	—	103.20	101.20	109.60	108.55										
	Close	—	103.55	110.25	112.25	110.85										

High, Low & Closing Prices of the December Value Line Stock Index Futures at K.C. Board of Trade

Year of Delivery		Yr. Prior to Delivery		Delivery Year												Life of Delivery Range
		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1982	High	Futures Trading			137.00	132.50	136.00	134.70	123.50	124.25	130.65	137.65	154.70	164.95	164.70	164.95
	Low	Began			129.90	117.00	125.30	122.10	112.70	115.20	109.90	127.40	128.50	146.80	151.90	109.90
	Close	Feb. 24, 1982			130.10	125.20	133.60	122.65	119.35	116.55	130.00	129.40	147.00	159.15	158.94	—
1983	High	165.65	168.50	175.50	181.00	184.25	192.80	204.80	213.35	211.70	200.90	206.45	205.60	201.30	199.05	213.35
	Low	150.30	155.55	160.80	168.10	177.20	178.20	189.65	199.50	199.75	192.25	196.70	189.25	189.30	192.45	111.40
	Close	161.55	163.20	172.65	177.20	180.60	192.60	200.60	209.95	201.15	197.80	200.25	190.75	197.85	194.05	—
1984	High	—	—	210.80	200.60	191.95	188.20	189.00	180.35	177.70	191.50	193.40	191.70	188.15	180.95	210.80
	Low	—	—	201.00	184.00	185.60	181.35	173.00	174.60	164.45	170.00	183.50	179.05	175.60	172.65	164.45
	Close	—	—	201.00	187.60	188.85	186.25	175.15	177.30	169.40	188.75	187.60	183.75	175.90	177.98	—
1985	High	—	—	—	211.55	215.45										
	Low	—	—	—	209.50	204.70										
	Close	—	—	—	211.40	207.30										

High, Low & Closing Prices of the September Major Market Stock Index Futures at Chicago BOT

Year of Delivery		Delivery Year									Life of Delivery Range
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1984	High	Futures Trading						222⅛	247	245⅞	247
	Low	Began July 23, 1984						215	222¼	234⅞	215
	Close							221⅞	241⅜	235½	—
1985	High	—	—	264⅞							
	Low	—	—	259							
	Close	—	—	262¼							

T.643G

STOCK INDEX FUTURES

Month End Open Interest of S&P 500 Stock Index Futures at Chicago IOM in Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	—	—	—	1,613	6,780	9,603	15,482	13,840	12,901	12,625	16,601	11,681
1983	15,748	22,841	17,766	25,556	30,796	25,013	28,616	29,747	24,129	29,329	27,967	25,349
1984	34,012	38,441	27,931	33,389	34,200	28,395	33,971	31,973	31,610	46,104	53,530	42,191
1985	58,332	62,142	57,664									

Source: Chicago International Monetary Market

T.643D

Month End Open Interest of NYSE Composite Stock Index Futures at New York in Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	—	—	—	—	4,024	4,384	4,646	4,690	5,722	5,459	7,753	5,273
1983	6,841	10,781	6,583	9,120	10,426	9,397	11,354	10,032	8,066	10,303	9,461	8,539
1984	9,348	9,874	8,571	8,454	9,376	7,957	7,918	10,968	9,710	9,181	7,745	7,149
1985	11,062	10,884	9,804									

Source: New York Futures Exchange

T.643E

Month End Open Interest of KC Value Line Stock Index Futures at Kansas City in Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	—	1,402	3,679	3,176	3,803	4,250	5,065	5,858	3,456	3,235	3,094	2,777
1983	3,292	3,942	2,879	2,948	4,482	4,487	4,408	3,654	3 381	3,476	3,924	4,498
1984	4,019	5,032	3,241	3,235	3,669	3,041	3,811	5,305	3,000	4,195	5,244	3,888
1985	7,563	7,332	5,741									

Source: Kansas City Board of Trade

T.643F

Month End Open Interest of Major Market Stock Index Futures at Chicago (CBT) in Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1984	Futures Trading Began July 23, 1984						5,423	5,846	7,610	11,594	14,211	13,515
1984												
1985	17,427	12,779	14,688									

Source: Chicago Board of Trade

T.643H

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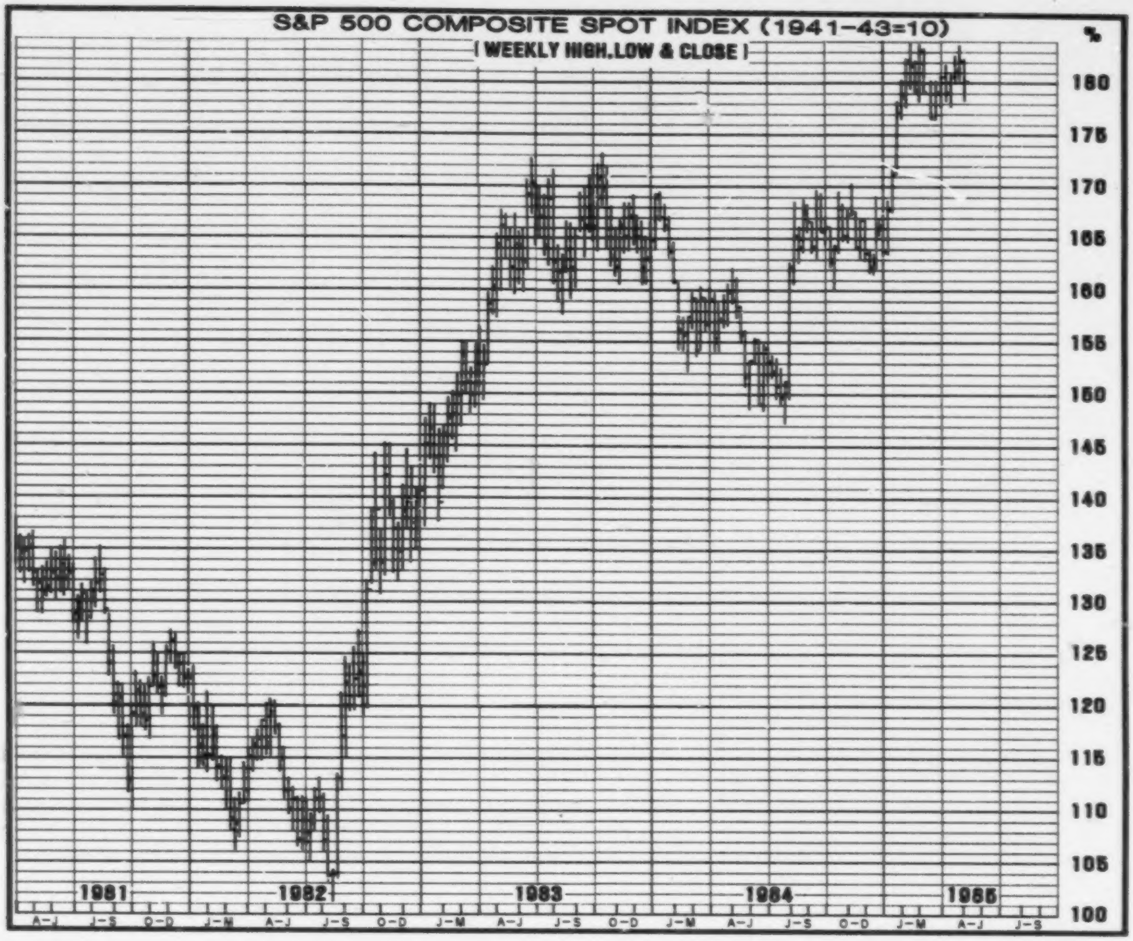
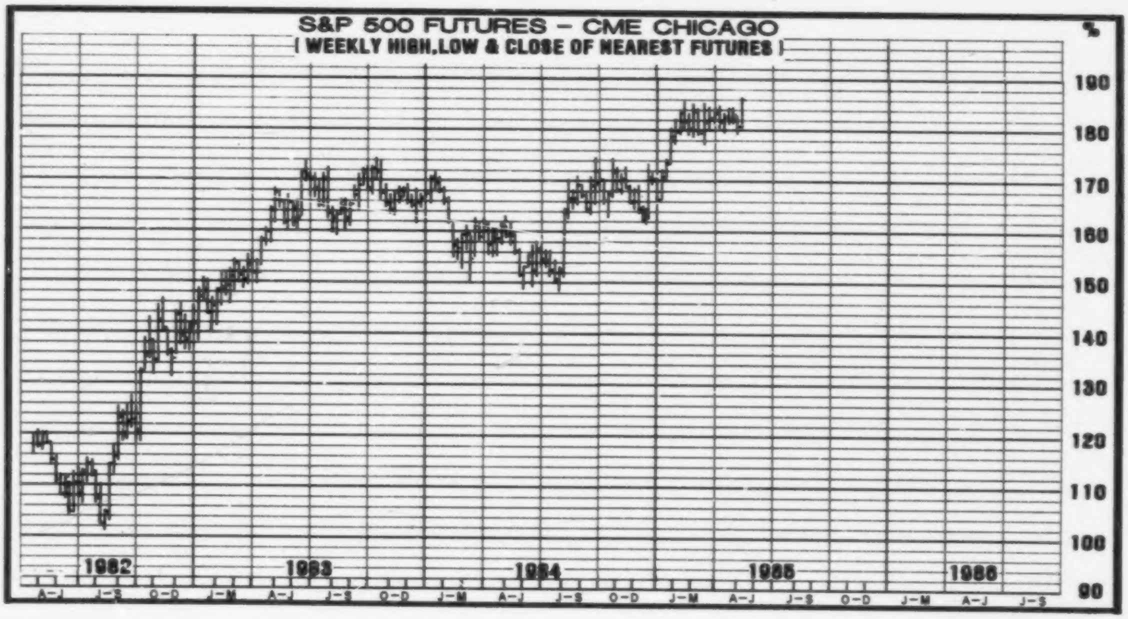
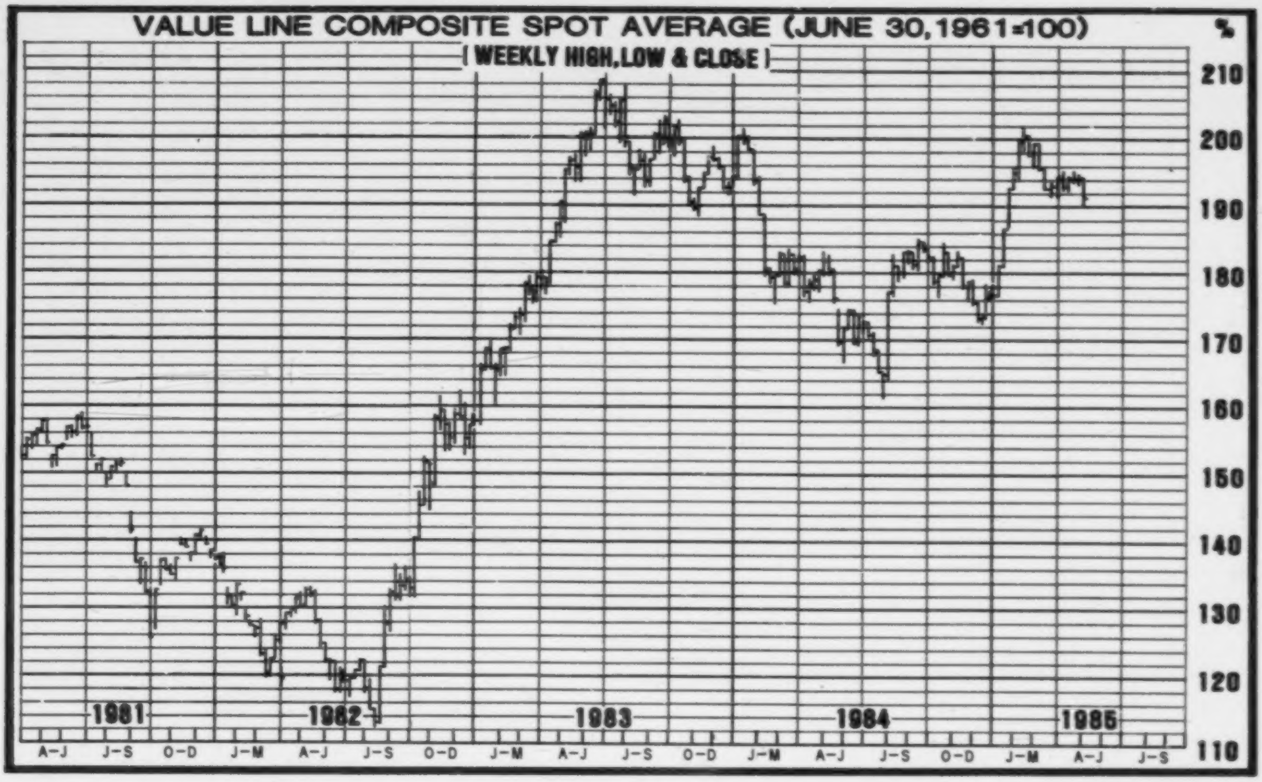

S&P 500 COMPOSITE SPOT INDEX (1941-43=10)
(WEEKLY HIGH, LOW & CLOSE)
%
180
175
170
165
160
155
150
145
140
135
130
125
120
115
110
105
100
1981
1982
1983
1984
1985
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S

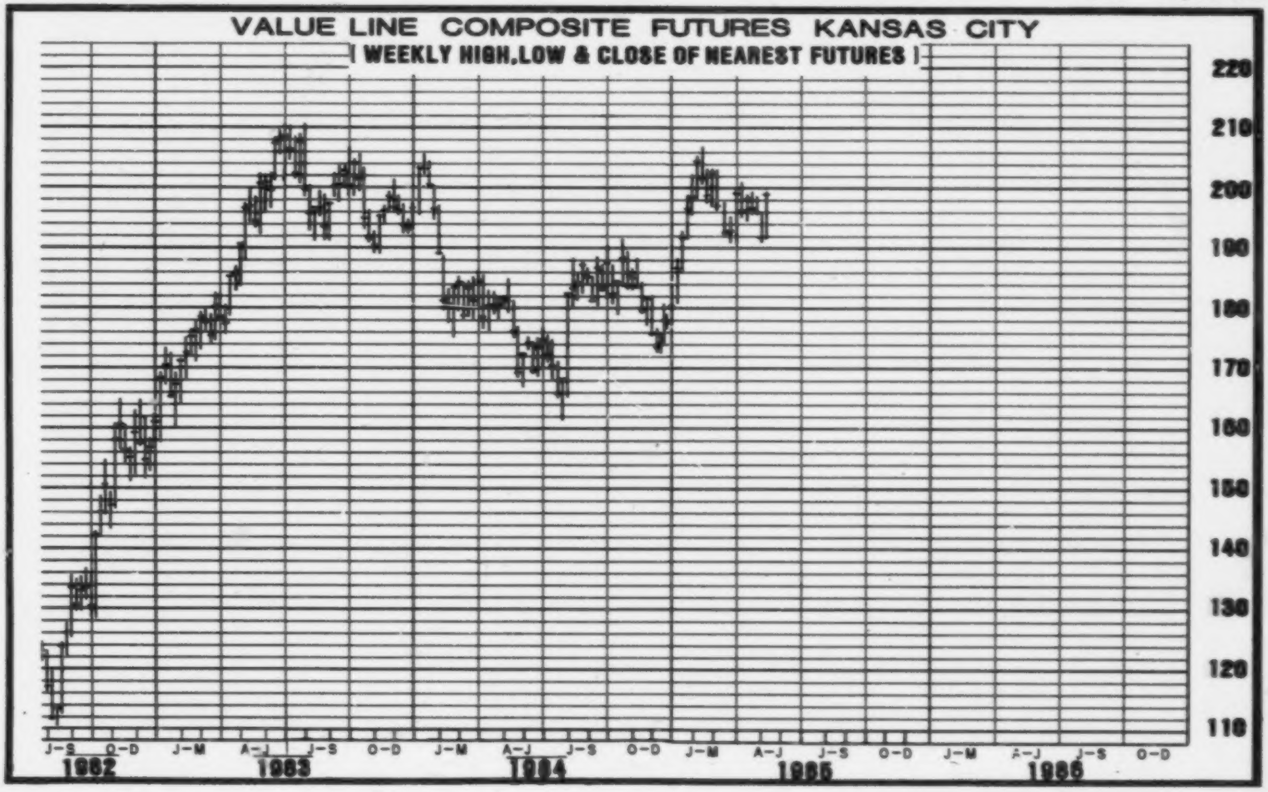

S&P 500 FUTURES - CME CHICAGO
(WEEKLY HIGH, LOW & CLOSE OF NEAREST FUTURES)
%
190
180
170
160
150
140
130
120
110
100
90
1982
1983
1984
1985
1986
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S



VALUE LINE COMPOSITE SPOT AVERAGE (JUNE 30,1961=100)

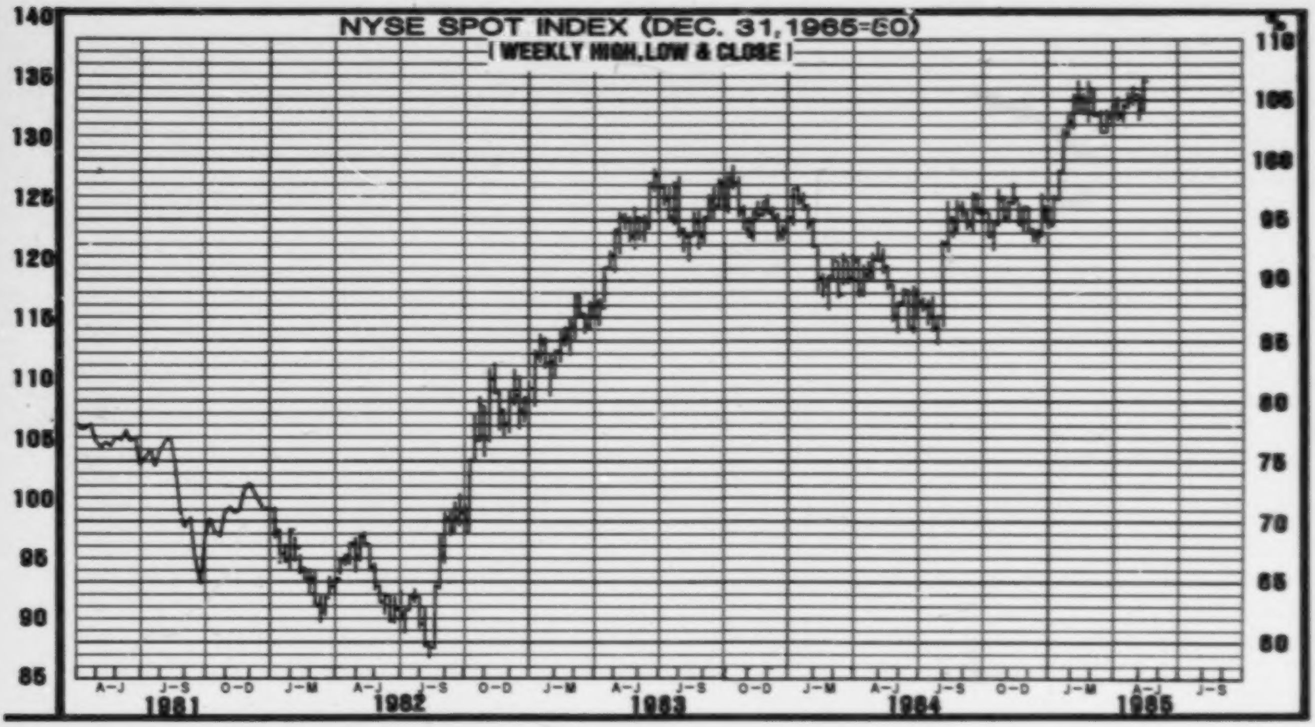
(WEEKLY HIGH,LOW & CLOSE)

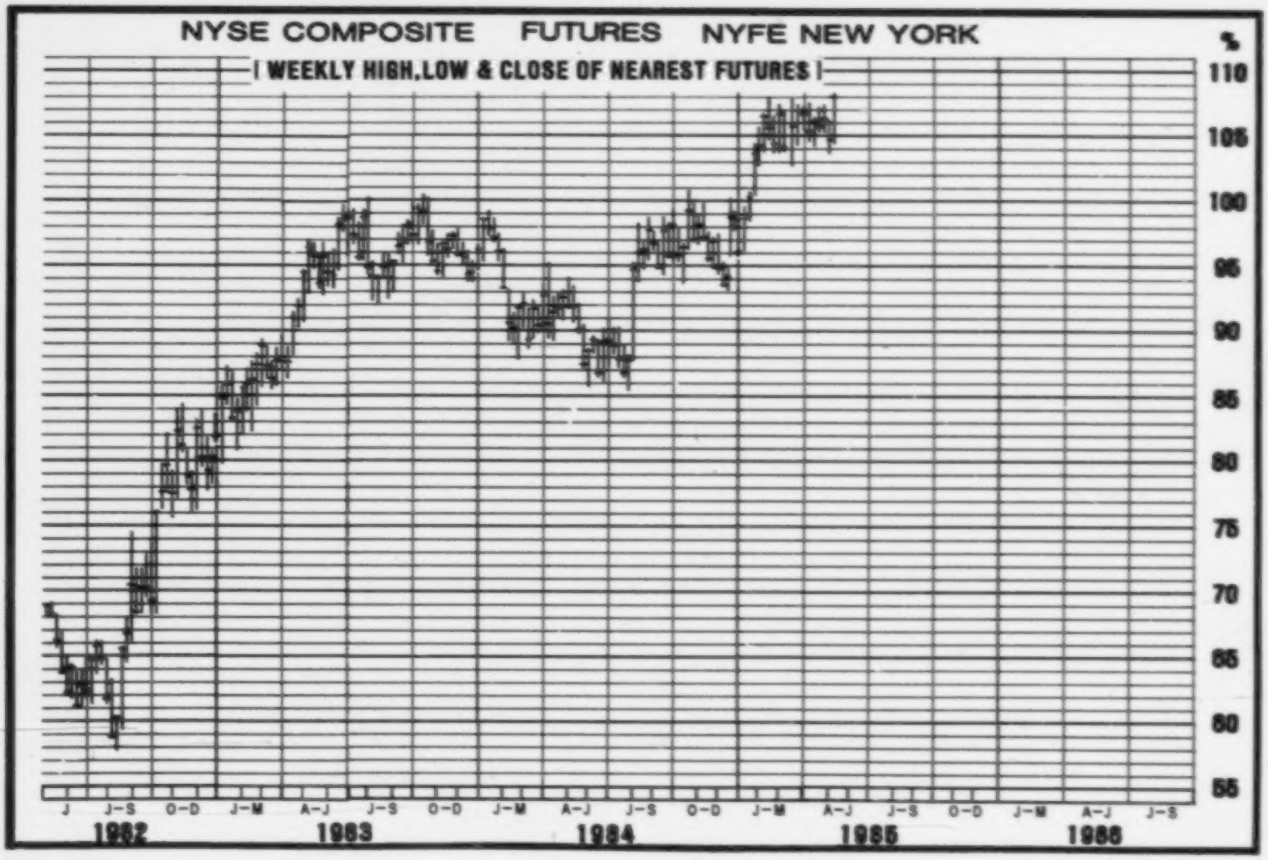
APR. 19,1985



VALUE LINE COMPOSITE FUTURES KANSAS CITY

(WEEKLY HIGH,LOW & CLOSE OF NEAREST FUTURES)


NYSE SPOT INDEX (DEC. 31,1965=50)
(WEEKLY HIGH,LOW & CLOSE)
140
135
130
125
120
115
110
105
100
95
90
85
%
110
105
100
95
90
85
80
75
70
65
60
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
1981
1982
1983
1984
1985


NYSE COMPOSITE FUTURES NYFE NEW YORK
(WEEKLY HIGH,LOW & CLOSE OF NEAREST FUTURES)
%
110
105
100
95
90
85
80
75
70
65
60
55
J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
1982
1983
1984
1985
1986

Sugar

World centrifugal sugar production in 1984/85 was last estimated in October 1984 at 97.5 million tons, raw value. Since that date, estimates for the Soviet Union, China, Yugoslavia, and West Germany were increased by a total 2.1 million tons. World prices, as a result were expected to continue to be under pressure into 1985. The prospect of increasing world sugar stocks implied that a significant reduction in the 1985/86 sugar crop would be needed to improve prices. Higher world sugar consumption in 1985/86 was expected. However, it was estimated that a 1.5 percent increase in consumption would lead to only a 1.5 million tonnage increase.

Sugar production in the Soviet Union was forecast at 9 million tons, raw value, an increase of 1.2 million from the late 1984 estimate and 3 percent over the year-earlier level. Soviet sugarbeet yields and sugar content were both up from the 1983 crop. West Germany's sugar production was estimated at 3.15 million tons in 1984/85, an increase of about 16 percent over the 1983/84 season. China and Yugoslavia were expected to enjoy a record production. China's sugar production was estimated at 4.3 million tons in 1984/85, up 13 percent from 1983/84, primarily because of increased sugar cane yields. Yugoslavia's 1984/85 sugar output was predicted to be nearly 1 million tons, up 27 percent from a year earlier due to good growing conditions that raised beet yields. By contrast, India's production was expected to fall below the year-earlier estimate of 7.3 million tons, raw value. Apparently, low prices discouraged growers in India from selling to mills.

World sugar prices for calendar 1984 averaged 5.18 cents a pound, down almost 39 percent from 1983 and the lowest annual unadjusted price since 1971. Much of the drop in price since 1980 was due to world production outstripping consumption. However, the world price of sugar is quoted f.o.b. Caribbean, contract no. 11, in U.S. cents per pound, and, therefore, the soaring dollar adversely affected prices for sugar. Prices were expected to remain at about 4–6 cents a pound in 1985 barring major production shortfalls.

U.S. sugar production for 1984 was officially estimated at 5.95 million tons, raw value, nearly a 5.6 percent increase over a year earlier. U.S. beet sugar production, estimated at 2.96 million tons, raw value, rose almost 10 percent from 1983/84. U.S. cane sugar production was estimated at 2.98 million tons, raw value, nearly 2 percent above 1983/84.

Calendar 1984 U.S. imports of sugar totaled 3.5 million tons, up about 350,000 from 1983, reflecting an increase in quota sugar for fiscal 1984. Also, more quota-exempt sugar for re-export was entered in calendar 1984 than in 1983. These imports, plus a drop in U.S. consumption of nearly 400,000 tons and a production rise of about 200,000 tons, caused stocks to rise substantially at the end of December.

About 6.65 million short tons of corn sweeteners (dry basis) were produced for domestic use in food and beverages in calendar 1984, up from 5.9 million in 1983. Total U.S. consumption in food and beverages, including imports was estimated at about 6.8 million tons. High-fructose corn syrup (HFCS) had the largest share of corn sweetener output, increasing to 4.2 million tons in 1984 from about 3.5 million in 1983. Demand for HFCS was boosted late in 1984 when the top cola companies decided to switch to all-HFCS sweetener use in their major colas, a move which had an adverse influence on sugar demand and prices.

Futures Market

Both world (No. 11) and domestic (No. 12) sugar futures are traded on the Coffee, Sugar & Cocoa Exchange, Inc. in New York. World raw sugar futures are actively traded on the London United Terminal Sugar Market.

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World Production of Sugar (Centrifugal Sugar–Raw Value) In Thousands of Metric Tons

Crop Year	Australia Cane	Brazil Cane	China (Mainland)	Cuba Cane	Hawaii Cane	India Cane	Indonesia Cane	Philippines Cane	Poland Beet	W. Germany	United States		USSR Beet	Mexico	France	World Total All
											Beet	Cane				
1977–8	3,322	8,863	2,450	7,200	934	8,201	1,125	2,397	1,819	3,076	2,820	1,497	8,825	3,029	4,268	92,454
1978–9	2,978	7,740	2,558	7,500	962	7,071	1,372	2,347	1,763	2,997	2,984	1,436	9,300	3,058	4,000	91,264
1979–0	2,967	6,990	2,507	6,500	928	5,170	1,331	2,325	1,582	3,095	2,612	1,488	7,800	2,763	4,257	84,560
1980–1	3,389	8,508	3,000	7,542	951	6,542	1,338	2,373	1,134	2,988	2,857	1,547	7,196	2,518	4,262	88,466
1981–2	3,434	8,393	3,400	8,207	821	9,727	1,742	2,503	1,873	3,688	3,011	1,603	6,413	2,842	5,576	100,555
1982–3	3,535	9,300	4,132	7,200	915	9,508	1,731	2,521	2,141	3,591	2,483	1,712	7,392	3,078	4,833	101,348
1983–4[2]	3,170	9,400	3,803	8,200	862	7,025	1,758	2,367	2,000	2,725	2,422	1,552	8,700	3,242	3,870	95,553
1984–5[1]	3,550	8,890	3,769	8,200	839	7,343	1,787	1,888	1,890	2,900	2,595	1,469	7,800	3,350	4,350	97,546

[1] Estimated. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.644

United States Sugar (Cane & Beet) Supply and Utilization In Thousands of Short Tons (Raw Value)

Year	Supply								Utilization						
	Production			Offshore Receipts									Domestic Disappearance		
													Imp. Blends & Mixtures	Military & Civilian	
	Cane	Beet	Total	Foreign	Territories	Total	Beginning Stocks	Total Supply	Total Use	Exports	Net Changes in Invisible Stocks	Refin. Loss Adjust.[3]		Total	Per Capita
1977	2,666	3,423	6,089	6,138	102	6,240	3,498	15,827	11,336	22	201	14	—	11,099	94.2
1978	2,535	3.067	5,602	4,683	52	4,735	4,491	14,828	11,074	48	29	108	4	10,889	91.4
1979	2,727	3,066	5,793	5,027	47	5,074	3,754	14,621	10,921	73	-12	103	—	10,756	89.3
1980	2,684	3,052	5,736	4,495	178	4,673	3,701	14,110	11,028	689	72	78	—	10,189	83.6
1981	3,043	3,182	6,225	5,025	48	5,073	3,082	14,380	10,919	1,191	-94	53	—	9,769	79.4
1982	2,776	3,160	5,936	2,964	80	3,044	3,461	12,441	9,373	137	23	53	7	9,160	73.7
1983[1]	3,094	2,588	5,682	3,186	67	3,253	3,068	12,003	9,433	300	144	72	105	8,917	71.1
1984[2]	2,829	3,059	5,888	3,594	24	3,618	2,570	12,076	8,990	429	20	51	115	8,530	67.4
1985[2]							3,086								

[1] Preliminary. [2] Estimate. [3] Residual. *Source: Agricultural Marketing Service, U.S.D.A.* T.645

Sugar Cane for Sugar & Seed and Production of Cane Sugar and Molasses in the United States

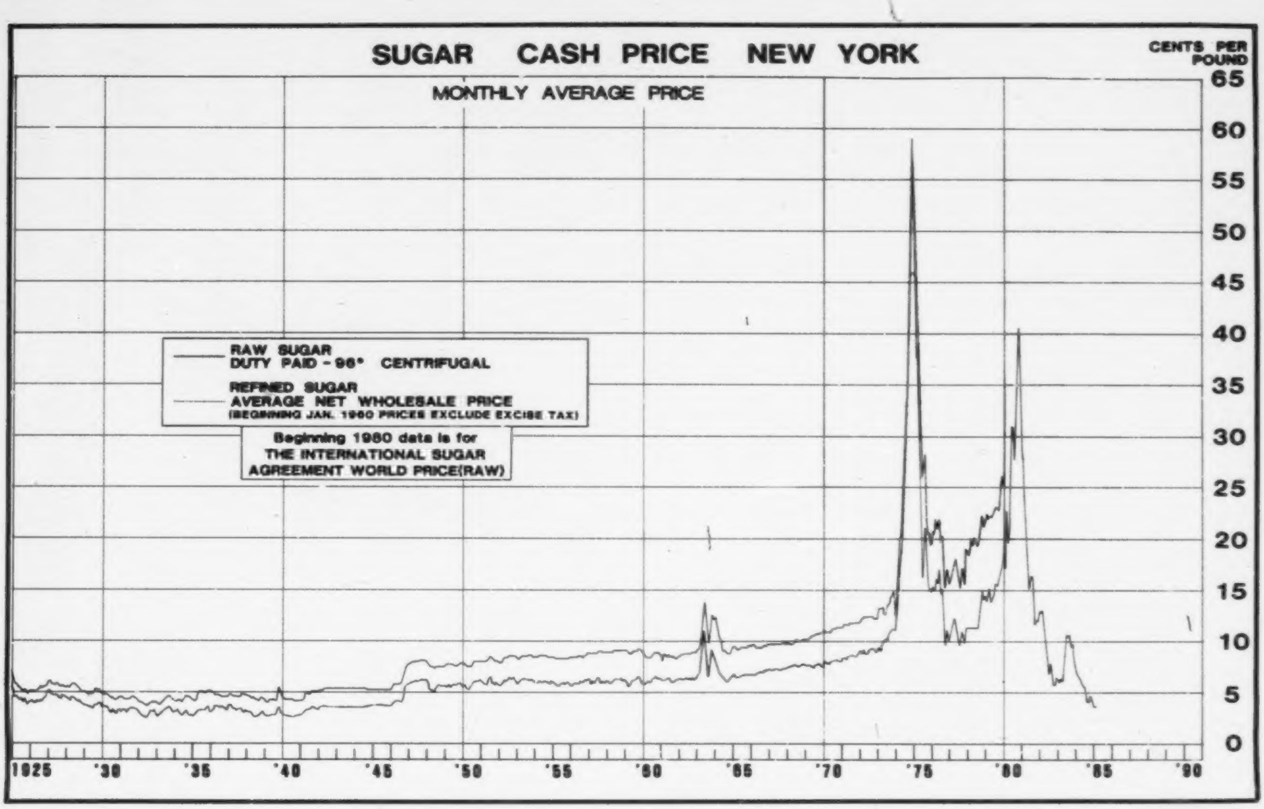
Year	Acreage Harvested 1,000 Acres	Yield of Cane per Acre Tons	Production			Farm Price $ per Ton	Farm Value		Sugar Production			Molasses Made		
									Raw Value					
			for Sugar	for Seed	Total		of Cane used for Sugar	of Cane used for Sugar & Seed	Total 1,000 Tons	Per Ton of Cane Lbs.	Refined Basis 1,000 Tons	Blackstrap (80° Brix)	Edible	Total
			1,000 Tons				1,000 Dollars					1,000 Gallons		
1976	747	37.6	26,919	1,201	28,120	13.70	408,403	425,342	2,724	202	2,545	179,180	2,574	180,730
1977	759	35.3	25,730	1,100	26,830	18.50	454,217	474,257	2,684	209	2,508		2,538	164,894
1978	744	35.0	24,821	1,176	25,997	19.40	483,905	507,069	2,612	210	2,441		2,750	161,810
1979	733	36.2	25,410	1,122	26,532	26.00	661,212	690,544	2,700	213	2,524		2,900	164,581
1980	733	36.8	25,582	1,381	26,963	38.50	984,559	1,035,990	2,728	213	2,550		1,900	163,341
1981	755	36.3	26,165	1,243	27,408	24.90	650,721	681,983	2,833	217	2,647		2,100	182,656
1982	742	40.1	28,450	1,321	29,770	26.50	754,587	789,896	3,063	215	2,863		1,550	177,041
1983[1]	768	36.7	27,201	960	28,161				2,930		2,739			175,875
1984[1]	746	37.6	26,720	1,309	28,029				2,983		2,788			162,665

[1] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.* T.646

U.S. Sugar Beets, Beet Sugar, Pulp, & Molasses Produced from Sugar Beets & Raw Sugar Spot Prices

Year of Harvest	Sugar Beets						Sugar Production		Raw Sugar Prices			Sugar Act Beet Payments $ Per Ton
	Acreage									Cof., Sugar Exch.		
	Planted	Harv.	Yield Per Har. Acre Tons	Production 1,000 Tons	Price[1] Dollars	Farm Value $1,000	Refined Basis	Equivalent "Raw Value"[2]	Intern.[4] Agreem.	World	N.Y. Duty Paid	
	1,000 Acres						1,000 Sh. Tons		Cents Per Lb.			
1977	1,273	1,216	20.6	25,007	24.20	604,399	2,905	3,108	8.10	8.11	11.00	
1978	1,305	1,269	20.3	25,788	25.20	649,846	3,074	3,289	7.81	7.82	13.93	
1979	1,161	1,120	19.6	21,996	33.90	745,273	2,691	2,879	9.65	9.66	15.56	
1980	1,231	1,190	19.8	23,502	47.20	1,108,974	2,943	3,149	28.66	29.02	30.11	
1981	1,252	1,228	22.4	27,538	29.20	803,569	3,166	3,388	16.89	16.93	19.73	
1982	1,054	1,027	20.3	20,894	35.40	740,342	2,558	2,737	8.40	8.42	19.92	
1983	1,081	1,056	19.9	20,992	37.00	777,718	2,522	2,699	8.46	8.49	22.04	
1984[3]	1,121	1,096	20.3	22,207			2,769	2,963	5.21	5.18	21.74	

[1] Includes support payments, but excludes Sugar beet payments. [2] Refined sugar multiplied by factor of 1.07. [3] Preliminary. [4] International Sugar Agreement, World Price. *Source: Statistical Reporting Service, U.S.D.A.* T.647



Sugar, Refined—Deliveries by Type of Product of Buyer in the U.S. In Thousands of Short Tons

Year	Bakery & Cereal Pdts.	Beverages	Confectionery[3]	Institutions	Dairy Products	Processed Foods	Other Food Uses	Retail Grocers[4]	Wholesale Grocers[5]	Other Uses[2]	Total Deliveries	In Consumer Size Pckgs.	To Industrial Users
1977	1,387	2,454	951	217	567	745	543	1,288	2,095	104	10,351	2,460	923
1978	1,308	2,608	912	230	531	689	412	1,180	1,996	161	10,027	2,267	909
1979	1,289	2,441	911	276	480	681	483	1,239	2,038	126	9,934	2,410	867
1980	1,337	2,161	932	303	450	535	589	1,169	1,881	120	9,477	2,347	703
1981	1,306	1,852	983	259	459	484	581	1,161	2,001	126	9,212	2,425	737
1982	1,296	1,583	940	177	404	450	526	1,086	1,951	106	8,519	2,310	727
1983	1,387	1,248	1,087	195	385	454	431	1,168	1,713	131	8,199	2,314	567
1984[1]	1,395	900	1,106	209	406	430	415	1,100	1,741	125	7,828	2,170	671

[1] Preliminary. [2] Used largely for pharmaceuticals & some tobacco. [3] And related products. [4] Chain stores, supermarkets. [5] Jobbers, sugar dealers. *Source: Stat. Rep. Serv., U.S.D.A.* T.649

Raw Sugar N.Y. Spot Price (C.I.F., Duty/Fee Paid, Contract #12) In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	10.5	11.3	11.7	12.4	11.2	10.0	9.5	11.0	10.8	9.8	11.4	11.4	10.9
1978	11.4	11.4	11.4	11.4	11.4	11.4	11.4	13.5	14.4	15.0	14.2	14.5	14.3
1979	13.8	15.0	15.3	13.9	14.1	14.6	15.7	15.4	15.7	15.9	16.2	18.0	15.3
1980[1]	19.66	24.69	21.18	22.67	31.89	32.10	28.75	33.14	36.03	41.70	39.28	30.29	30.11
1981	29.57	26.07	23.81	19.91	17.43	18.95	19.10	17.42	15.49	15.66	16.28	17.07	19.73
1982	18.16	17.77	17.13	17.89	19.57	21.03	22.15	22.45	20.88	20.44	20.79	20.83	19.92
1983	21.23	21.76	21.86	22.43	22.60	22.54	22.09	22.55	22.20	21.94	21.83	21.47	22.04
1984	21.51	21.90	22.00	22.03	22.01	22.06	21.89	21.72	21.70	21.56	21.40	21.10	21.74
1985	20.72	20.38											

[1] Prices prior to 1980 are for raw cane (96°), duty paid C.I.F. New York. *Sources: Economic Research Service, U.S.D.A.; N.Y. Coffee & Sugar Exchange* T.648

World Stocks of Centrifugal Sugar as of Sept. 1 In Thousands Metric Tons (Raw Value)

Sugar-Making Season	Australia	Brazil	France	W. Germany	India	Italy	Japan	Mexico	Netherlands	Philippines	Sweden	Iran	United Kingdom	Ins. Areas	Total
1976–7	328	1,746	174	165	737	337	98	642	139	744	138	207	139	2,399	10,574
1977–8	534	1,286	706	202	732	562	104	198	199	1,607	127	304	253	2,718	12,820
1978–9	383	1,516	947	305	1,448	859	350	134	207	1,290	140	364	234	3,375	15,843
1979–0	687	3,008	962	537	1,934	758	421	138	222	1,214	108	354	455	3,549	19,122
1980–1	555	1,959	899	535	386	833	497	192	196	727	93	325	625	2,904	14,353
1981–2	499	2,234	415	300	706	663	212	167	181	158	75	275	706	2,508	12,322
1982–3[1]	672	1,955	1,092	458	3,144	880	341	91	243	269	91	280	828	2,783	17,275

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.650

United States Production & Imports of Edible Sirups In Thousands of Gallons

	Production[2]								Imports				
	Sirups												
Year	Corn	Cane	Sorghum	Maple	Refiners'	Edible Molasses	Honey	Total	Maple Sirup	Edib. Molas. & Cane Sirup	Honey	Shipm. From Terr.	Total
1976	615,498	—	—	927	2,403	2,574	16,756	638,158	886	3,188	5,608	—	9,682
1977	695,196	—	—	1,221	2,197	2,538	15,076	716,228	867	1,773	5,396	—	8,036
1978	751,809	—	—	1,154	2,571	2,750	19,466	777,750	811	2,077	4,727	—	7,615
1979	845,741	—	—	1,219	2,524	2,900	20,160	872,544	857	2,944	4,948	—	8,749
1980	941,056	—	—	973	1,983	1,900	16,871	962,783	855	3,422	4,143	—	8,420
1981	1,073,933	—	—	1,410	1,446	2,100	15,703	1,094,592	1,046	2,040	6,530	—	9,616
1982	1,212,759	—	—	1,292	1,003	1,550	18,666	1,235,230	1,154	2,566	7,767	—	11,487
1983[1]										2,336			
1984[1]										3,495			

[1] Preliminary. [2] Production of cane sirup, sorghum sirup, & edible molasses is of the fall of the preceding year. *Source: Agricultural Marketing Service, U.S.D.A.* T.652

U.S. Exports & Domestic Consumption of Edible Sirups, Corn Sugar & Sugar In Thousands of Gallons

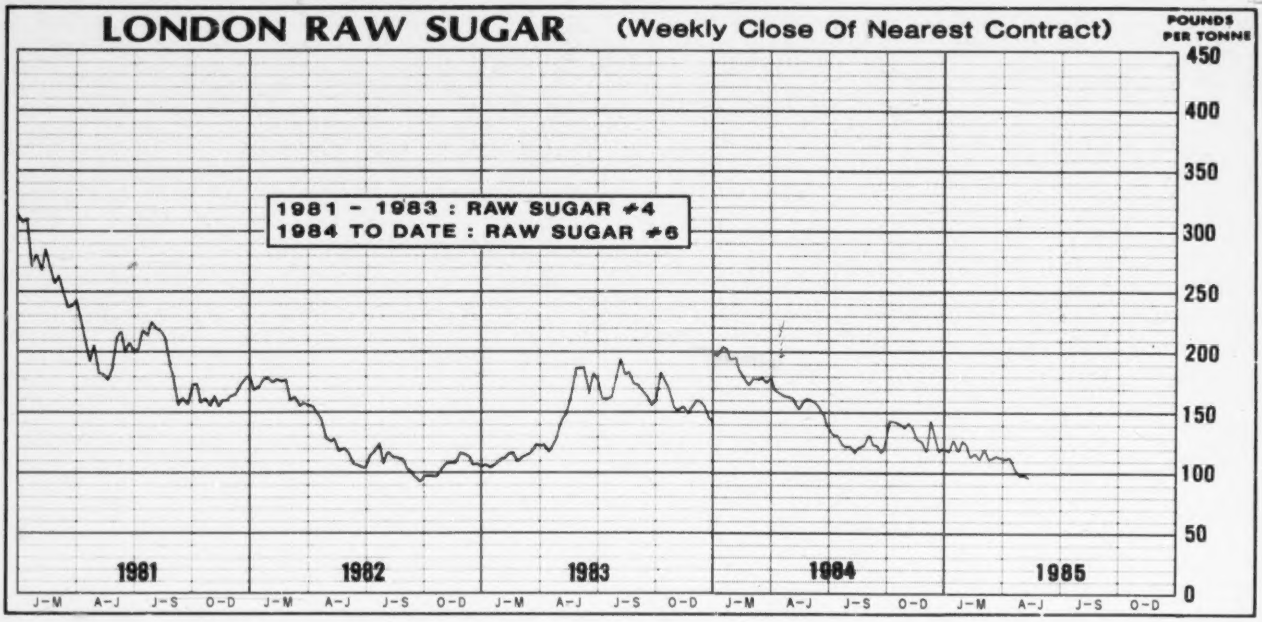
	Exports			Indicated Domestic Consumption					Per Capita Consumption in Pounds							
				Sirups									Sugar			
Year	Corn Sirup	Honey	Total	Corn	Maple	Cane & Refin. & Edib. Mol.	Honey	Total	Corn Sweeteners[2]	Corn Sugar	Aspartame	Saccharin	U.S. Grown	Cane	Total	Total All Sweeteners
1976	1,674	396	2,070	613,824	1,813	8,165	21,968	645,770	29.7	5.5	0	6.1	54.4	61.4	93.4	
1977	1,543	466	2,009	693,653	2,088	6,508	20,006	722,255	31.2	5.5	0	6.6	52.7	64.4	94.2	
1978	1,694	679	2,373	750,115	1,965	7,398	23,514	782,992	33.7	5.5	0	6.9	50.3	64.0	91.4	
1979	1,207	747	1,954	844,534	2,076	8,368	24,361	879,339	36.8	5.5	0	7.0	47.6	62.8	89.3	
1980	3,498	722	4,220	937,558	1,828	7,620	20,292	967,298	40.3	5.5	0	7.7	51.2	56.8	83.6	132.8
1981	2,916	777	3,693	1,071,017	2,456	5,586	21,456	1,100,515	44.5		.2	8.0	47.1	53.8	79.4	131.4
1982[1]	791	721	1,512	1,211,968	2,446	5,119	25,712	1,245,245	48.2		1.0	8.4	49.8	48.4	73.7	134.0
1983[1]									52.2		3.5	7.2	47.1	47.9	71.1	
1984[1]									57.9		5.8				67.4	

[1] Preliminary. [2] Corn Syrup & Dextrose. *Source: Agricultural Marketing Service, U.S.D.A.* T.653

Sugar Deliveries and Stocks in the United States In Thousands of Short Tons, Raw Value

	Deliveries by Primary Distributors							Stocks (January 1)					
Year	Cane[1] Sugar Refineries	Beet Sugar Factories	Importers of Direct Consumption Sugar	Cane Sugar Mills[1]	Total	Sales of Refined Sugar For Export	Total Domestic Consumption[2]	Cane Sugar Refineries	Beet Sugar Factories	Importers of Direct-Consumption	Refiners' Raws	Mainland Cane Mills	Total
1976	7,079	3,815	76	15	10,197	68	10,895	250	1,490	0	428	458	2,731
1977	7,738	3,509	172	17	10,495	35	11,248	279	1,661	0	776	509	3,341
1978	7,691	3,198	180	18	10,174	48	10,889	286	1,691	91	964	556	3,588
1979	7,565	3,191	84	18	10,069	73	10,756	257	1,560	0	510	641	2,968
1980	7,024	3,165	7	45	9,933	689	10,189	315	1,205	0	691	1,068	3,279
1981	6,617	3,151	17	24	10,207	1,191	9,769	272	1,286	0	832	658	3,048
1982	6,127	3,026	46	24			9,153	272	1,296	0	844	931	3,344
1983	5,910	2,902					8,812	262	1,417	0	510	701	2,897
1984[3]	5,703	2,732					8,435	225	1,103	0	528	592	2,448
1985[3]								218	1,430	0	481	830	2,960

[1] Sugar for direct consumption only. [2] Includes deliveries for U.S. military forces at home and abroad. [3] Preliminary. *Source: Department of Agriculture* T.654



Month-End Open Interest of World Sugar (#11) Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	41,918	32,736	30,260	31,558	34,902	34,186	35,419	34,381	30,702	31,290	30,439	31,498
1979	35,004	34,529	36,200	31,824	36,521	39,646	44,938	58,184	61,442	73,701	87,182	92,007
1980	103,041	87,843	68,667	61,126	69,666	68,554	68,996	70,993	71,316	79,313	76,754	64,740
1981	61,522	57,087	59,025	54,898	62,330	61,022	66,730	64,604	52,740	60,761	66,399	72,326
1982	76,623	60,990	65,457	57,719	61,332	51,267	54,706	51,737	42,363	50,682	61,916	64,406
1983	78,889	76,429	83,851	88,011	99,100	94,091	94,216	94,245	80,360	81,261	83,302	84,059
1984	81,806	73,634	92,503	84,925	92,769	89,393	90,897	98,425	76,056	85,413	86,508	80,550
1985	91,973	81,892	84,390									

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y. T.660

United States Deliveries[1] of All Sugar by Primary Distributors In Thousands of Short Tons, Raw Value

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	838	774	964	811	893	947	923	1,103	860	924	879	840	10,756
1980	794	848	866	772	943	882	910	904	909	825	717	818	10,189
1981	2,217			2,522			2,726			2,303			9,769
1982	2,083			2,418			2,400			2,252			9,153
1983	2,078			2,195			2,350			2,189			8,812
1984[2]	2,032			2,093			2,231			2,059			8,435

[1] Includes for domestic consumption and for export. [2] Preliminary. *Source: Department of Agriculture* T.659

Volume of Trading of World Sugar (#11) Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	61,854	70,103	86,634	79,359	65,623	98,323	75,940	116,271	115,808	99,632	75,243	71,983	1,016,773
1979	72,961	107,951	76,267	82,804	64,224	132,200	121,474	142,006	192,220	255,858	278,458	256,919	1,783,342
1980	381,805	354,441	338,118	245,233	309,417	277,846	271,884	279,149	317,170	295,673	250,627	255,379	3,576,702
1981	233,217	237,286	212,519	240,420	212,708	241,736	192,142	203,404	247,160	138,529	137,768	183,438	2,470,327
1982	166,913	209,386	199,263	217,689	138,377	177,657	176,641	144,980	151,639	140,262	160,656	154,657	2,037,020
1983	207,678	249,392	198,034	261,939	396,435	396,267	272,150	329,129	283,827	214,897	231,757	160,436	3,201,941
1984	192,451	205,499	252,489	227,150	175,268	213,491	163,955	228,279	263,419	234,008	154,735	124,579	2,449,549
1985	273,316	265,967	215,540										

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y. T.661

Centrifugal Sugar (Raw Value) Imported into Selected Countries In Thousands of Metric Tons

Crop Year	Algeria	Canada	Chile	France	W. Germany	Israel	Japan	Malaysia	Morocco	Nigeria	Iran	Un. Kingdom	China	United States	USSR	World Total[2]
1976	354	895	98	136	169	131	2,439	336	263		626	2,101	638	4,136	3,760	22,593
1977	431	1,064	342	110	108	153	2,708	336	389	329	277	1,870	1,676	5,290	4,776	25,949
1978	437	1,030	317	117	152	195	2,284	398	294	595	875	1,689	1,438	3,616	3,993	23,843
1979	513	1,010	294	103	146	256	2,605	418	279	530	746	1,424	985	4,437	4,080	24,827
1980	569	859	433	69	150	119	2,265	510	332	709	785	1,404	946	3,802	4,981	26,480
1981-2	535	929	194	376	186	180	2,209	432	350	600	755	1,307	1,060	3,196	6,883	28,935
1982-3	600	993	249	357	183	207	1,770	500	307	570	650	1,050	2,480	2,865	5,926	28,452
1983-4[1]	565	843	200	363	180	190	1,870	511	360	650	650	1,500	1,362	3,442	5,600	27,839
1984-5[3]	565	930	81	360	175	190	1,870	500	360	650	650	1,300	1,000	3,187	5,250	26,260

[1] Preliminary. [2] Excludes U.S. trade with Territories. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.655

Centrifugal Sugar (Raw Value) Exported from Selected Countries In Thousands of Metric Tons

Crop Year	Australia	Brazil	Czechoslovakia	Cuba	Dom. Republic	France	Thailand	Mauritius	Peru	Philippines	South Africa	Taiwan	Un. Kingdom	USSR	World Total[2]
1976	2,016	1,252	71	5,764	977	1,422	1,124	584	284	1,467	860	519	285	79	22,818
1977	2,558	2,518	171	6,238	1,101	1,816	1,657	637	434	2,443	1,384	599	178	87	28,271
1978	2,482	2,005	306	7,231	901	2,357	1,040	579	275	1,142	719	365	93	174	26,088
1979	2,002	1,860	242	7,269	986	2,347	1,190	641	181	1,150	884	387	76	244	26,373
1980	2,410	2,615	186	6,191	794	2,750	479	655	53	1,745	785	403	100	164	27,290
1981-2	2,620	2,984	160	7,734	816	3,226	2,419	560	63	1,314	851	380	122	268	33,044
1982-3	2,687	2,984	250	6,792	816	3,066	1,560	628	92	1,407	1,027	181	390	165	81,701
1983-4[1]	2,600	3,100	175	7,100	864	3,300	1,366	624	120	965	424	150	240	250	30,670
1984-5[3]	2,860	2,800	200	7,000	900	3,000	2,100	575	130	950	990	10	175	300	30,220

[1] Preliminary. [2] Excludes U.S. trade with Territories. [3] Forecast. *Source: Agricultural Marketing Service, U.S.D.A.* T.656

Spot Raw Sugar International Sugar Agreement World Price[1] In Cents per Pound

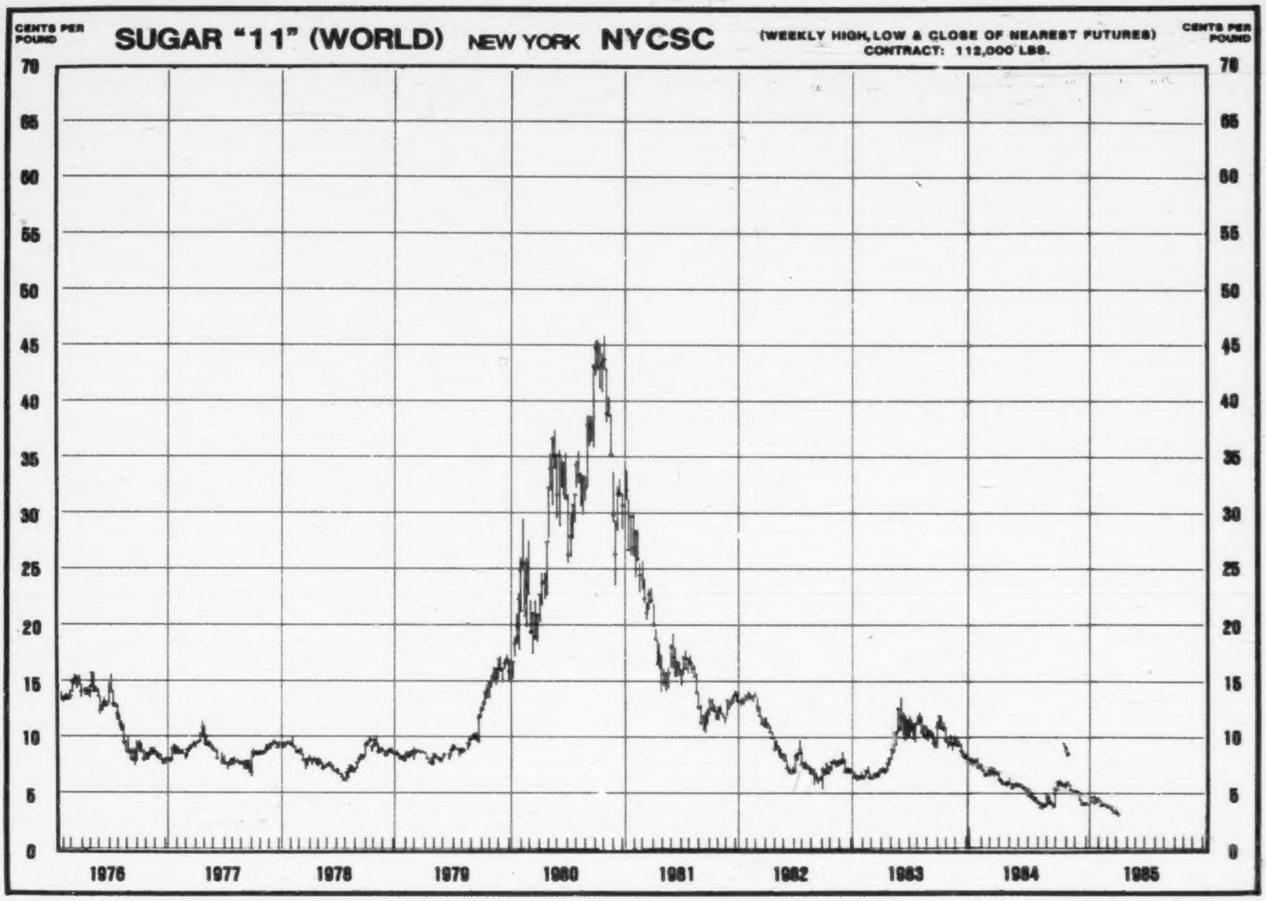
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	20.9	20.3	22.1	21.0	22.2	19.7	20.4	17.1	15.2	17.2	16.0	15.6	19.0
1977	16.0	16.7	17.1	18.1	17.2	15.7	15.1	17.2	16.5	15.5	19.1	18.5	16.9
1978	18.7	20.1	19.3	20.1	20.0	19.8	19.1	20.5	21.3	22.3	21.4	22.0	20.4
1979[1]	7.57	8.23	8.46	7.82	7.85	8.14	8.52	8.85	9.90	11.94	13.68	14.93	9.65
1980	17.16	22.69	19.64	21.24	30.94	30.80	27.70	31.77	34.89	40.53	37.81	28.79	28.66
1981	27.78	24.09	21.81	17.83	15.06	16.38	16.34	14.76	11.65	12.04	11.97	12.98	16.89
1982	12.90	13.07	11.26	9.58	8.11	6.84	7.80	6.77	5.76	5.93	6.52	6.31	8.40
1983	6.03	6.43	6.20	6.71	9.24	10.74	10.53	10.56	9.43	9.69	8.33	7.67	8.46
1984[2]	6.97	6.64	6.42	5.99	5.61	5.53	4.54	4.05	4.16	4.65	4.38	3.55	5.21
1985[2]	3.62	3.70											

[1] Prices prior to 1979 are for refined cane at N.Y. (excluding excise tax). [2] Preliminary. *Source: Sugar Division, Commodity Stabilization Service* T.657

Average Refined Cane Sugar[1] (Wholesale)—Northeast In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	21.31	20.86	22.20	21.41	21.87	20.22	20.46	17.04	15.85	16.90	16.28	15.97	19.20
1977	16.70	16.94	17.45	18.52	17.52	16.40	16.13	17.38	16.57	16.35	18.50	18.88	17.28
1978	19.85	20.54	20.03	20.18	20.31	20.13	19.90	20.70	21.83	22.65	22.05	22.27	20.87
1979	22.27	22.44	22.54	22.35	22.53	22.71	22.96	23.79	23.50	23.34	23.48	26.47	23.20
1980	27.51	35.00	29.48	31.55	41.96	43.53	39.92	44.15	48.05	55.06	52.84	42.86	40.99
1981	41.80	37.47	35.51	31.42	27.90	29.74	29.96	28.79	25.08	25.99	27.10	27.40	30.68
1982	27.5	27.8	26.9	27.7	29.3	30.7	32.0	32.5	31.9	30.9	30.7	31.0	29.9
1983	31.3	32.0	31.5	31.9	32.0	32.5	32.5	32.5	32.5	32.0	31.5	32.0	
1984	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
1985	31.5												

[1] These are f.o.b. basis prices in 100-lb. paper bags, not delivered prices. To obtain delivered prices, add freight "prepays" & deduct discounts & allowances. *Source: Economies & Statistics Service, U.S.D.A.* T.658



High, Low & Closing Prices of March World Sugar (#11) At New York   In Cents per Pound

Year of Delivery		Year Prior to Delivery													Delivery Year		Life of Delivery Range
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	
1980	High	10.27	9.94	10.30	10.15	9.74	9.72	10.14	10.58	10.91	12.10	14.64	16.91	17.40	22.05	29.45	29.45
	Low	9.76	9.44	9.71	9.55	9.12	9.20	9.29	9.74	9.94	10.50	11.56	14.16	14.85	15.10	19.75	9.12
	Close	9.86	9.75	10.09	9.74	9.45	9.38	9.96	10.07	10.69	11.56	14.08	16.86	16.31	22.01	23.20	—
1981	High	17.06	22.42	28.50	30.08	28.00	39.45	39.38	38.35	37.30	42.20	45.05	45.75	33.75	33.85	28.60	45.75
	Low	15.50	15.56	22.35	21.70	22.60	28.00	33.30	28.17	32.40	33.90	40.85	35.05	24.50	26.15	23.00	13.75
	Close	16.41	22.38	27.37	23.53	27.20	37.94	38.34	32.25	35.07	41.16	43.34	35.11	30.58	26.79	23.25	—
1982	High	28.20	27.68	26.18	22.20	20.30	17.85	19.00	17.95	16.80	13.60	13.36	13.28	14.06	14.10	13.98	36.60
	Low	23.75	23.85	22.10	19.35	16.65	15.40	16.05	15.85	13.25	11.75	11.50	11.67	12.52	12.64	12.23	11.50
	Close	25.68	24.50	22.13	20.08	17.43	17.85	16.05	16.98	13.26	13.11	12.52	13.01	13.18	13.58	12.63	—
1983	High	15.15	15.25	15.05	13.68	12.51	10.50	9.35	10.74	8.97	8.22	7.85	8.33	8.28	6.84	7.34	15.25
	Low	13.98	14.03	13.49	12.18	10.28	9.24	8.28	8.37	7.83	7.05	6.60	7.27	6.80	6.05	6.08	6.05
	Close	14.71	14.90	13.65	12.49	10.52	9.25	9.33	8.78	7.96	7.11	7.84	8.32	6.85	6.20	6.28	—
1984	High	9.95	8.92	9.45	9.00	9.77	14.48	13.50	13.16	13.44	11.96	11.94	10.10	9.62	8.29	7.66	14.48
	Low	8.75	8.48	8.11	8.08	8.72	9.60	11.33	10.84	11.60	10.98	9.33	8.82	7.99	7.26	5.65	5.65
	Close	8.98	8.62	8.17	9.00	9.64	14.48	12.52	12.79	11.63	10.94	9.36	9.57	8.18	7.50	5.73	—
1985	High	11.50	10.25	9.60	9.44	9.12	8.39	7.70	6.74	6.08	6.17	6.27	6.05	5.35	4.84	4.45	13.60
	Low	10.06	9.38	8.63	8.74	8.28	7.19	6.61	5.62	4.94	5.05	5.33	5.08	4.02	4.01	3.74	3.74
	Close	10.16	9.56	8.75	9.04	8.40	7.45	6.73	5.72	5.80	5.44	5.83	5.28	4.16	4.32	4.10	—
1986	High	7.40	7.12	6.43	6.05												
	Low	6.02	6.13	5.70	5.05												
	Close	6.22	6.31	5.83	5.06												

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y.

T.662

Sulfur

World mine production of sulfur in 1984 was about 4 percent above 1983 output, ending 3 consecutive years of decline, according to the U.S. Bureau of Mines. World sulfur demand exceeded production by about 3 million tons, bringing about a remelt of about 2 million tons of Canadian sulfur and a stock decrease in the U.S. Production of elemental sulfur in the U.S. increased 15 percent in 1984.

Apparent domestic consumption of sulfur in 1984 was nearly 16 percent larger than in 1983. Domestic shipments of elemental sulfur increased about 11 percent. Stimulated by improved fertilizer demand, agricultural chemicals (fertilizers) accounted for an estimated 65 percent of domestic demand in 1984; organic and inorganic chemicals and other chemical products—10 percent; petroleum refining—7 percent, and metal mining—3 percent.

U.S. dependence on imports continued in 1984. Imports of Frasch and recovered sulfur in 1984 were 51 percent greater than in 1983. Major import sources were Canada and Mexico. Exports of sulfur also increased, by 34 percent.

From a 1983 base, U.S. demand for sulfur is expected by the Bureau of Mines to increase at an average annual rate of 3.2 percent through 1990. Domestic sulfur production in 1985 is estimated at 10.8 million tons and U.S. apparent consumption at 12.5 million tons.

Producers' stocks at the end of 1984 amounted to 2.43 million metric tons, 25 percent below the 3.22 million on hand a year earlier. Frasch sulfur accounted for virtually all of the ending stocks.

World Production of Elemental Sulfur (Native & Other Elemental [All Forms]) In Thous. of Metric Tons

Year	Argentina	Spain	Chile	China	France[3]	W. Germany	Canada	Italy	Japan	Mexico	Poland	USSR	Israel	Turkey	United States	World Total
1978	38	1,176	53	1,900	2,223	1,601	7,247	684	2,728	1,918	5,421	9,240	10	122	11,175	52,138
1979	20	1,224	104	2,000	2,288	1,649	7,027	571	2,891	2,125	5,195	9,240	10	107	12,101	53,227
1980	N.A.	1,236	115	2,200	2,216	1,799	7,260	604	2,784	2,217	5,535	9,590	10	126	11,866	54,920
1981	10	1,268	143	2,300	2,042	1,732	6,799	544	2,609	2,178	5,123	9,690	10	177	12,145	53,350
1982[1]	0	1,167	137	2,300	2,061	1,821	6,281	489	2,595	1,916	5,285	9,640	10	185	9,787	50,776
1983[2]	—	1,131	139	2,600	2,063	1,540	6,625	458	2,645	1,633	5,240	9,590	10	180	9,290	50,472
1984[2]		1,200			1,800	1,600	6,500	500	2,700	1,800					10,300	52,500

[1] Preliminary. [2] Estimate. [3] Content of ore. *Source: Bureau of Mines* T.663

Salient Statistics of Sulfur in the United States In Thousands of Metric Tons of Sulfur Content

Year	Production of: Native Sulfur[2] Frasch-Process Total	Production of: Native Sulfur[2] Mines Louisiana	Production of: Native Sulfur[2] Mines Texas	Production of: Recovered Elemental Brimstone	Production of: Pyrites (Includ. Coal Brasses)	Production of: By-product Sulfuric Acid[3]	Production of: Other Sulf. Acid Compounds	Production (All Forms)	Imports—Pyrites & Sulfur	Producers' Stocks Dec. 31[4]	Exports (Sulfur)	Apparent Consumption (All Forms)	Value $ Metric Ton Elem. Sulfur F.O.B. Mine/Plant
1978	5,648	1,928	3,720	4,062	301	1,103	61	11,175	2,177	5,345	827	12,600	45.17
1979	6,357	2,460	3,897	4,070	400	1,167	107	12,101	2,494	4,239	1,963	13,739	55.75
1980	6,390	2,309	4,081	4,073	322	1,003	78	11,866	2,523	3,094	1,673	13,659	89.06
1981	6,348	2,440	3,908	4,259	307	1,159	72	12,145	2,522	3,634	1,392	12,785	111.48
1982	4,210	1,312	2,898	4,404	265	828	80	9,787	1,905	4,202	961	10,059	108.27
1983[1]	3,202	1,286	1,915	4,955	N.A.	831	302	9,290	1,695	3,218	992	10,988	90.62
1985[5]	4,193			5,202				10,300	2,559	2,434	1,334	12,400	99.00

[1] Preliminary. [2] Or sulfur ore. [3] Basis 100%, produced at Cu, Zn, & Pb plants. [4] Frasch & recovered sulfur. [5] Estimates. *Source: Bureau of Mines* T.664

Sulfur Consumption & Foreign Trade of the United States In Thousands of Metric Tons

Year	Net Import Reliance as a % of Apparent Consumption	Apparent Consumption of Sulfur in All Forms[3]: Native Sulfur (Frasch)	Apparent Consumption of Sulfur in All Forms[3]: Recovered Sulfur Sales	Apparent Consumption of Sulfur in All Forms[3]: Total Pyrites	Apparent Consumption of Sulfur in All Forms[3]: Smelter Acid Prod.	Apparent Consumption of Sulfur in All Forms[3]: Other Prod.[2]	Apparent Consumption of Sulfur in All Forms[3]: Total	Imports of Recovered Sulfur	Sales to Consumers of Native Sulfur	Imports of Native Sulfur	Foreign Trade: Exports Quantity	Foreign Trade: Exports Value Ths. $	Foreign Trade: Imports Quantity	Foreign Trade: Imports Value Ths. $
1978	12	5,902	4,088	301	1,103	61	12,600	1,185	5,736	993	827	34,667	2,177	75,671
1979	11	6,773	4,108	400	1,167	107	13,739	1,265	7,507	1,229	1,963	142,966	2,494	94,147
1980	14	6,717	4,115	322	1,003	78	13,659	1,533	7,400	990	1,673	185,866	2,523	138,852
1981	5	5,550	4,207	307	1,159	72	12,785	1,666	5,910	856	1,392	187,407	2,522	209,766
1982	4	3,557	4,344	265	828	80	10,059	1,215	3,598	690	961	122,143	1,905	164,885
1983[1]	15	4,114	5,041	N.A.	831	302	10,988	1,091	4,111	604	992	109,298	1,695	129,110
1984[4]	17		5,199				12,400	1,812	5,001	722	1,334	156,067	2,557	200,189

[1] Preliminary. [2] Includes hydrogen sulfide, liquid sulfur dioxide. [3] Crude sulfur equivalent. [4] Estimate. *Source: Bureau of Mines* T.665

Sunflowerseed and Oil *(See feature article on page 21T)*

World production of sunflowerseed for the 1984/85 season was forecast by the USDA in early 1985 at 16.9 million metric tons, up about 9 percent from estimated 1983/84 output. Expected gains in the U.S., Argentina and the European Community more than offset a reduction in estimated Soviet production. Argentina was expected to account for a larger-than-usual share of world production.

Global sunflowerseed exports were expected by the USDA to total about 2.09 million tonnes, up from an estimated 1.95 million for the 1983/84 season. The U.S. continues to dominate world exports of sunflowerseed, but U.S. exports in 1984/85 were expected to drop to the lowest level since 1976/77. Larger production in the EC and increased competition from Argentina were the major factors expected to curtail U.S. exports. Mexico remains the largest U.S. export market for sunflowerseed. Argentina usually exports little sunflowerseed, but is a dominant factor in world sunflowerseed product exports.

World 1984/85 ending stocks were projected by the USDA at 362 thousand tonnes vs. an estimated 336 thousand tonnes on September 30, 1984.

World sunflowerseed meal production in 1984/85 was forecast by the USDA at 6.68 million metric tons versus an estimated 6.22 million in 1983/84. Exports were estimated at 1.35 million tonnes versus 1.20 million in 1983/84. World consumption was forecast at 6.57 million tonnes versus 6.33 million, and ending stocks were projected at 132 thousand tonnes versus 129 thousand at the end of the 1983/84 season. Argentina was expected to remain the world's largest exporter of sunflowerseed meal, with the European Community its major market. The Soviet Union is the world's largest producer of sunflowerseed meal, but consumes all that it produces.

The USDA forecast global 1984/85 sunflowerseed oil production at 6.03 million tonnes compared with 5.63 million in 1983/84. World consumption was estimated at 5.85 million tonnes versus 5.64 million in 1983/84 and exports at 1.58 million tonnes versus 1.48 million in 1983/84. Ending stocks were projected to increase slightly to 216 thousand tonnes from 184 thousand a year earlier.

Futures Market

Sunflowerseed futures are listed but inactive on the Minneapolis Grain Exchange.

World Production of Sunflowerseed In Thousands of Metric Tons

Crop Year	Argentina	Australia	Bulgaria	Canada	China	France	Hungary	Romania	South Africa	Spain	Turkey	United States	USSR	Yugoslavia	World Total
1979-0	1,650	142	415	218	340	159	417	888	328	504	550	3,409	5,414	525	15,238
1980-1	1,260	139	378	166	910	227	456	817	517	670	630	1,750	4,618	302	13,075
1981-2	1,810	115	457	165	1,332	398	624	810	254	405	575	2,035	4,678	327	14,762
1982-3	2,300	93	507	94	1,286	650	585	843	202	750	660	2,419	5,344	202	16,523
1983-4[1]	2,200	154	505	51	1,370	810	500	750	525	750	700	1,451	5,040	137	15,492
1984-5[2]	2,700				1,450					943		1,698	4,900		16,750

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.668

Sunflowerseed Statistics in the United States

					Supply				Disappearance					
Crop Year	Acres Harvested In Ths.	Yield per Harv. Acre Pounds	Farm Price $ Metric Ton	Value of Production Mil. $	Production	Imports	Stocks Sept. 1	Total	Crushings	Exports	Non-Oil Usage	Seed	Residual	Total
					In Thousands of Metric Tons									
1979-0	5,410	1,349	200	660.0	3,310	10	90	3,410	547	1,820	——147——			2,514
1980-1	3,683	1,016	245	413.9	1,697	28	896	2,621	780	1,505	——154——			2,439
1981-2	3,811	1,177	238	485.4	2,035	32	182	2,249	374	1,555	——177——			2,106
1982-3	4,724	1,129	196	474.1	2,419	40	143	2,602	766	1,348	——191——			2,305
1983-4[1]	3,063	1,044	315	457.1	1,451	31	297	1,779	590	1,057	——111——			1,758
1984-5[1]	3,692	1,014	265	450.0	1,698	35	21	1,720	575	1,000	——111——			1,785

[1] Preliminary. *Source, Economic Research Service, U.S.D.A.* T.666

Sunflowerseed Statistics in the United States In Metric Tons

	Sunflowerseed Oil							Sunflowerseed Meal						
	Supply			Disappearance				Supply			Disappearance			
Crop Year Begin. Oct.	Stocks Oct. 1	Production	Total	Exports	Domestic	Total	Price $ per Metric Ton (Crude Mpls.)	Stocks Oct. 1	Production	Total	Exports	Domestic	Total	Price $ per Metric Ton 28% Protein
1979-0	7	224	231	86	72	158	575	4	359	363	—	359	359	106
1980-1	73	298	371	301	29	330	594	4	439	443	—	440	440	122
1981-2	41	137	178	103	63	166	550	3	201	204	—	200	200	117
1982-3	12	303	315	229	43	272	495	4	434	438	—	433	433	112
1983-4[1]	43	214	257	195	50	245	741	5	304	309	30	274	304	123
1984-5[1]	12	228	240	175	50	225	660	5	320	325	30	290	320	100

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.* T.667

Tall Oil

Tall Oil—Supply & Distribution in the U.S. In Millions of Pounds

Year Beginning Oct. 1	Supply (Crude)			Disposition										
						Non Food Products								
	Production	Stocks Oct. 1	Total Supply	Exports	To U.S. Territ.	Soap	Paint & Varnish	Lino-leum & Oil-cloth	Resins & Plastics	Other Drying Oils	Lubricants & Similar Oils	Fatty Acids	Other	Total Nonfood Products
1971	1,299	148	1,447	165	.1	3	46	—	—	28	8	1,033	41	1,132
1972	1,326	150	1,476	173	.2	3	45	—	—	—	9	1,062	43	1,163
1973	1,235	139	1,374	219	.3	3	42	—	—	—	8	967	42	1,062
1974	1,054	93	1,147	120	.1	2	33	—	—	—	7	783	33	858
1975-6	1,176	169	1,345	233	1.6	3	39	—	—	—	7	861	42	953
1976-7	1,181	148	1,329	176		7								1,015
1977-8	350	169	519	168		3								230
1978-9	1,267	150	1,417	107		3	8		5			1,141	96	1,254
1979-0[1]	1,353	150	1,503			3	11		10		6	1,208	74	1,312
1980-1[1]	1,336	155	1,491			4	11		15		5	1,206	94	1,334
1981-2[2]	1,190	137	1,327			3	16		17		4	1,096	48	1,185
1982-3[2]	1,557	151	1,708				33		25			1,096	64	1,228
1983-4[2]	1,293	204	1,497											
1984-5[2]		95												

[1] Preliminary. [2] Estimated. *Source: Agricultural Marketing Service, U.S.D.A.* T.669

U.S. Tall Oil Consumption in Inedible Products[2] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	102.2	88.3	82.0	93.0	90.8	106.2	92.3	90.9	96.6	88.2	107.7	72.6	1,111
1972	95.8	92.8	105.4	91.9	95.6	92.8	88.7	104.4	95.8	102.4	88.9	74.0	1,129
1973	102.0	77.2	106.2	96.6	107.6	87.0	105.4	115.3	100.2	103.6	104.6	81.0	1,187
1974	98.6	77.5	90.5	86.8	92.9	81.4	90.5	84.0	70.6	83.1	82.5	84.0	1,022
1975	62.5	85.4	31.9	55.1	63.3	78.1	62.4	80.3	89.5	77.6	68.2	71.2	825
1976	65.7	91.0	87.2	70.4	101.5	82.8	69.4	98.9	68.6	80.8	79.4	79.5	975
1977[2]	81	88	103	97	99	95	87	97	85	110	100	91	1,134
1978	85	103	105	108	117	112	95	107	100	100	100	94	1,226
1979	97	102	111	119	125	123	90	85	107	117	105	103	1,284
1980	97	114	113	125	111	118	95	104	111	116	113	104	1,321
1981	110	110	107	110	128	124	97	112	104	104	108	83	1,203
1982	95.4	107.4	121.8	105.2	96.8	95.6	84.7	95.8	88.3	94.4	84.3	66.9	1,136
1983	100.0	96.3	106.9	92.8	98.7	109.1	98.1	114.0	93.7	94.1	95.0	82.6	1,181
1984[1]	100.8	100.7	105.6	97.8	104.2	113.6	117.2	105.2	111.2	100.6	95.7	85.2	1,238
1985[1]	84.1	87.2											

[1] Preliminary. [2] Prior to 1977, data is for Domestic Disappearance. *Source: Statistical Reporting Service, U.S.D.A.* T.670

Tall Oil Production in the United States In Millions of Pounds

Crop Year		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1983-4	Crude	107.9	105.4	93.4	99.5	116.3	125.6	111.7	117.8	109.0	105.1	106.1	95.4	1,293.2
	Refined	12.1	14.8	9.9	13.0	11.6	13.4	12.0	13.4	10.7	13.0	12.9	12.6	149.4
1984-5[1]	Crude	112.8	110.7	109.2	95.2	103.1								
	Refined	12.9	11.7	10.9	10.2	9.9								

[1] Preliminary. *Source: Bureau of the Census* T.0578

Tall Oil Stocks in the United States In Millions of Pounds

Crop Year		Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1
1983-4	Crude	217.2	205.4	185.7	186.2	164.6	160.1	168.9	179.7	190.2	163.3	149.0	123.6
	Refined	19.9	18.8	18.1	17.4	16.3	15.9	15.5	12.9	11.7	9.2	11.1	11.1
1984-5[1]	Crude	112.8	101.9	103.0	109.5	108.7	117.3						
	Refined	9.9	10.9	12.6	13.0	130.6	12.4						

[1] Preliminary. *Source: Bureau of the Census* T.0578A

Tallow and Greases *(See feature article on page 21T)*

The Foreign Agricultural Service of the USDA in March 1985 estimated 1984/85 world production of tallow and grease at 6.40 million tonnes, slightly below the revised estimate of 1983/84 production and the first reduction since 1981/82. An expected drop in U.S. cattle and hog slaughter accounted for much of the reduced tallow and grease production estimate.

Edible tallow is primarily a byproduct of the commercial beef industry and, in the U.S., must be federally inspected to be termed "edible." It is used in some processed foods and in direct use as a frying fat in the "fast food" segment of the restaurant industry in competition with soybean oil, other vegetable oils and lard on a price basis. Inedible tallow and grease is a major raw material for fatty acids, and is used extensively in animal feeds. It is also used in some lubricants. The fact that the bulk of U.S. inedible tallow exports go to less developed countries suggests that its food use might be greater than might be expected, although it is difficult to determine to what extent tallow is used for edible purposes worldwide.

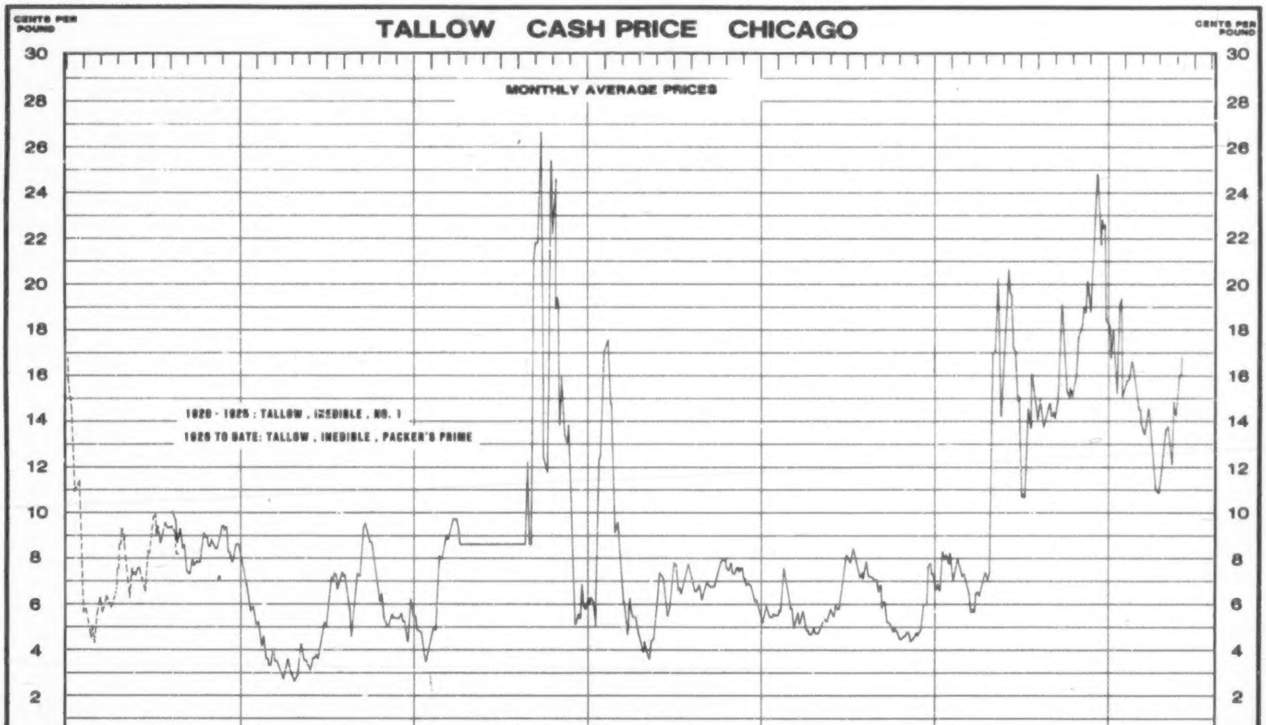
The U.S. is the world's largest producer of edible and inedible tallow and grease, and accounts for around 50 percent of world production. In late 1984, the USDA estimated 1984/85 U.S. production of edible tallow at 1.19 billion pounds, down 11 percent from 1983/84 output of 1.34 billion pounds. Edible tallow stocks at the beginning of the 1984/85 season were a very low 28.5 million pounds.

U.S. consumption (domestic disappearance) of edible tallow in the 1984/85 season was forecast by the USDA at 1.15 billion pounds versus an estimated 1.25 billion pounds in 1983/84. Baking and frying fats account for most of the U.S. consumption of edible tallow.

The U.S. accounts for more than one-half of the world trade in tallow and grease. Inedible tallow exports in calendar year 1984 dropped 6 percent from the 1983 total, to 1.23 million tonnes from 1.31 million the previous year. The less developed countries accounted for the largest, and increasing, share of total exports in 1984. Exports of edible tallow in 1984/85 were expected to decline to about 60 million pounds, about 8 percent less than estimated 1983/84 exports. The strong dollar was a major factor in reduced inedible tallow exports in calendar year 1984, and 1984/85 exports were expected to be influenced by the course of the U.S. dollar in foreign exchange markets.

Inedible tallow and grease production in the U.S. in the 1983/84 season was estimated at 6.0 billion pounds, consumption in end products at 2.95 million pounds, and ending stocks at 285 million pounds. Animal feed accounts for the bulk of inedible tallow and grease consumption, followed by fatty acids, and soap and a small amount of lubricants and similar oils.

Prices for edible tallow tend to follow the lead of soybean oil, and at times, the price of lard. In early April 1985, bleachable fancy tallow, Chicago was quoted at a discount of nearly 40 percent to the price of soybean oil, and was also slightly lower than lard prices. This development was expected to favor increased domestic use of edible tallow.



World Production of Tallow and Greases (Edible and Inedible) In Thousands of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Colombia	USSR	France	W. Germany	Italy	Mexico	Netherlands	New Zealand	United Kingdom	United States	Eastern Europe	World Total
1976	301	370	203	216	23	342	205	181	95	29	81	134	145	2,817	136	5,647
1977	312	400	233	217	22	333	230	186	100	31	83	120	152	2,770	131	5,675
1978	342	397	214	270	23	343	232	205	95	33	88	98	153	2,638	135	5,644
1979	331	334	200	203	26	345	243	221	100	32	90	112	188	3,058	137	6,171
1980[1]	308	309	200	204	29	340	220	235	105	33	94	118	235	3,157	132	6,273
1981	313	309	210	213	32	355	205	235	106	52	96	125	218	3,290	140	6,355
1982	276	316	220	220	32	350	188	232	96	47	91	125	218	3,228	138	6,241
1983	261	308	230	215	30	355	192	235	94	64	89	138	222	3,351	127	6,372
1984[1]	270	296	210	212	29	365	192	250	94	69	95	129	240	3,384	133	6,432

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

T.672

Salient Statistics of Tallow and Greases (Inedible) in the United States In Millions of Pounds

	Supply				Exports & Shipments	Utilization in Nonfood Products						Wholesale Prices, ¢ Per Lb.		
													Inedible Chicago	
Year	Apparent Production[2]	Imports	Stocks Jan. 1	Total		Soap	Animal Feed	Fatty Acids	Lubricants & Oils	Other	Total[3]	Edible, (Loose) Chicago	No. 1	Bleachable Fancy
1976	5,774	9	277	6,060	2,337	764	1,396	817	142	164	3,367	16.5	13.2	15.0
1977	5,981	4	355	6,340	2,893	737	1,397	764	128	158	3,099	21.2	13.6	17.1
1978	5,871	3	344	6,218	2,698	695	2,489				3,184	22.8	16.0	19.8
1979[1]	5,956	3	347	6,306	2,795	663	2,454				3,117	26.2	18.8	
1980[4]	6,110		422		3,254	617	1,308	813	69	177	2,984	21.6	14.3	
1981[4]	7,253	0	451		3,005						2,894	31.1	15.3	
1982[4]	7,116	0	399		3,080								12.8	
1983[4]	7,388	0	368		3,025									
1984[4]	7,460	0	376		2,965									
1985[4]			368											

[1] Preliminary. [2] Apparent production based on reported factory production, net foreign trade, & change in stocks. Reported factory production excludes that from small rendering plants. [3] Includes small amounts used in drying-oil products in some years. [4] Estimate. *Sources: Economic Research Service, U.S.D.A.; Bureau of Labor Statistics*

T.673

Edible Tallow: Supply, Disappearance, and Price, U.S. In Million Pounds, Rendered Basis

	Supply			Disappearance					
Calendar year	Stocks Jan. 1	Production	Total	Domestic	Exports	Total	Direct use	Per capita Lb.	Price[1] ¢ Lb.
1978	42	835	877	802	20	822			22.8
1979	55	905	960	853	50	903	87	3.9	26.2
1980	57	1,043	1,101	957	88	1,047	242	4.2	21.6
1981	56	1,130	1,188	992	142	1,134	225	4.3	30.3
1982	54	1,110	1,163	1,030	75	1,106	303	5.0	N.A.
1983[2]	59	1,260	1,319	1,166	107	1,273	480	5.0	N.A.
1984[2]	43								

[1] Loose, average wholesale, Chicago. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.*

T.673A

Average Wholesale Price of Tallow, Inedible, Packers (Prime), C.A.F. Chicago In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	14.1	14.4	15.0	13.7	13.9	14.2	14.8	14.2	14.4	14.1	14.1	14.3	14.3
1977	14.7	14.9	15.9	17.6	19.2	17.6	16.9	15.3	15.0	15.5	15.3	15.0	16.1
1978	15.4	16.0	17.3	17.8	17.9	18.2	18.9	18.7	19.5	19.8	20.1	18.8	18.4
1979	19.8	20.8	22.9	24.8	24.1	21.7	22.8	22.4	22.6	20.9	18.4	18.2	21.6
1980	18.1	16.7	17.5	18.0	16.8	15.2	16.8	19.0	19.4	17.5	20.4	19.0	17.9
1981	15.8	15.8	16.0	16.5	15.6	16.0	15.2	15.0	14.5	14.5	13.9	13.6	13.6
1982	13.4	13.4	14.1	14.4	14.5	14.3	13.6	12.0	11.4	11.0	11.0	10.8	12.8
1983	11.4	12.0	12.5	13.6	13.8	13.2	12.1	13.7	14.9	14.2	14.8	15.1	13.4
1984	16.0	16.0	16.8	17.0	19.1	20.0	17.1	16.2					

Source: Economic Research Service, U.S.D.A.

T.674

Tea

According to the USDA, tea production in selected countries during 1984 was estimated around 2.05 million tons, 3 percent above the 1.99 million tons (revised) produced in 1983. The world's largest producer, India, was estimated to have produced 635,000 tons in 1984, up 8 percent from 588,000 tons harvested during 1983. This increase in production was attributed to favorable growing weather, both in the south and the north of the country, as well as to increased producer input and the drawing into production of new high-yielding areas. The 1984 tea output of China was estimated around 380,000 tons, which was 5 percent below the record 401,000 ton production in 1983. Tea production in Sri Lanka during 1984 amounted to a record 215,000 tons, 20 percent over the 1983 crop, which was sharply curtailed by a drought. The increase in Sri Lanka's tea crop in 1984 resulted from a heavier application of fertilizers by producers and also the prevalence of favorable weather conditions. Kenya's tea output was estimated at 110,000 tons, 8 percent under 1983's all-time high production of 119,738 tons. Drought was responsible for the 1984 reduction.

Partly due to rising prices for tea on world markets, Sri Lanka officially announced that, over the next four years, approximately 50,000 acres now devoted to the production of rubber would be turned to tea production. Also, Sri Lanka reportedly planned to turn 3,100 hectares from the production of old seedling tea and replant them with vegetatively propagated tea. It was planned to infill another 10,300 hectares with 125 million tea bushes. Officials in Kenya expected that Kenya's tea harvest in 1985 should be helped by the unexpected rains that fell in the first part of the year during the last part of the October/March prime harvest period.

In late 1984, prices for tea on the London auction market set record highs, around 350 pence (at that time, about $4.40) per kilogram compared to 280–290 pence a year earlier. Consumption in India, which increased 36 percent between 1977 and 1983, accounted for much of the surge in demand. As a result, the Indian government limited tea exports to 97.5 million pounds in 1984, a move affecting mostly the crush-tear-curl (CTC) variety of blackened tea.

World Tea Production, in Major Producing Countries In Thousands of Metric Tons

Year	Argentina	China	Sri-Lanka (Ceylon)	India	Indonesia	Iran	Japan	Kenya	Malawi	Mozambique	Bangladesh	Taiwan	Turkey	Uganda	USSR	World Total
1971	25.0	N.A.	217.8	435.5	48.2	24.0	92.9	36.3	18.6	16.5	12.5	27.0	33.6	18.0	68.6	1,123
1972	24.0	N.A.	213.5	456.0	49.8	22.0	94.8	53.3	20.7	18.7	23.8	26.2	46.5	23.4	71.3	1,197
1973	23.1	N.A.	211.3	472.0	54.5	23.0	101.0	56.6	23.6	18.8	27.6	28.6	43.2	20.4	74.8	1,236
1974	26.0	N.A.	204.0	492.1	51.7	25.0	95.2	53.4	23.3	17.6	32.2	24.2	42.8	21.7	80.8	1,245
1975	29.0	N.A.	213.7	487.1	56.8	23.0	105.4	56.7	26.2	13.1	29.0	26.1	55.6	18.4	86.3	1,284
1976	33.0	N.A.	196.6	511.8	61.1	22.0	100.1	62.0	28.3	13.8	33.3	24.8	59.5	15.4	92.0	1,316
1977	21.6	252.0	208.6	556.3	64.3	24.0	102.3	86.3	31.7	17.0	38.0	26.3	84.1	15.2	106.4	1,709
1978	26.3	268.0	199.0	563.8	73.2	23.0	104.7	93.4	31.7	18.1	38.0	25.9	86.5	10.9	111.2	1,755
1979	32.1	277.1	206.4	551.9	73.3	21.0	98.0	93.3	32.6	19.7	35.9	27.1	102.0	1.8	117.6	1,782
1980[1]	34.0	304.0	191.4	575.9	72.2	20.0	102.3	89.9	29.9	19.0	39.9	24.5	95.9	1.5	129.8	1,816
1981[2]	25.0	343	210.1	561	78.9	20.0	102	90.9	32.0	22	41.1	26.0	43	1.2	134	1,829
1982[2]		381	188	566			105	96	38	20			90		135	1,895
1983[2]		401	179	589	85		103	120	39	20					145	1,960
1984[2]		411	208	645	88		92	116							150	2,088

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.677

World Tea Exports from Producing Countries In Thousands of Metric Tons

Year	Sri Lanka (Ceylon)	China	India	Indonesia	Japan	Malaysia	Bangladesh	Taiwan	Total Asia	Kenya	Mozambique	Total Malawi	Africa	Argentina	Grand Total
1971	200.8	41.0	204.4	40.2	1.5	1.0	—	22.8	531.7	34.3	17.5	18.2	105.6	22.4	665.5
1972	190.1	42.0	209.8	38.5	1.9	.8	13.2	21.3	535.8	47.4	18.4	19.9	129.3	18.9	688.7
1973	205.5	50.2	188.2	35.6	2.2	.6	20.3	21.1	547.0	51.5	17.9	22.1	137.4	18.0	709.0
1974	185.1	63.6	205.9	50.2	1.8	.6	21.2	17.2	563.6	49.6	17.2	23.8	134.3	24.1	728.3
1975	212.4	61.3	219.4	46.0	2.2	.5	24.1	20.1	592.3	52.6	12.2	24.2	132.6	17.4	747.5
1976	199.7	61.2	237.3	47.5	3.2	.5	30.7	21.1	608.7	59.3	12.9	29.6	142.2	25.1	782.7
1977	185.5	81.8	229.6	51.3	3.5	.5	26.0	20.8	611.1	70.2	12.9	29.9	158.6	26.9	803.1
1978	192.6	86.9	176.1	56.2	3.4	.6	30.9	20.4	576.7	85.0	16.7	30.6	178.1	31.0	795.1
1979	187.5	106.8	199.6	53.6	3.1	.6	31.9	19.3	616.0	94.0	18.2	31.0	180.1	29.6	835.0
1980	184.5	107.9	224.0	74.2	2.7	.6	31.0	18.2	657.6	74.8	18.0	31.3	157.4	33.7	857.8
1981[1]	182.8	92.0	241.2	71.3	2.7	.6	29.2	15.9	648.8	75.6	18.0	31.5	159.6	25.8	843.1
1982	181.1	105.8	189.9	63.7	2.5	.6	34.4	10.1	596.1	79.8	18.0	37.1	172.1	33.1	810.7

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.678

Salient Statistics of Tea in the United States In Millions of Pounds

	U.S. Imports: (In Thous. Metric Tons[2])													Domestic Disappearance			
Year	Brazil	Argentina	Sri Lanka (Ceylon)	China	India	Indonesia	Japan	Kenya[2]	Mozambique	Netherlands	Malawi	Taiwan	Total	Total Supply	Military	Civilian	Per Capita per Lb.
1971			54.8		22.8	25.4	2.6	21.4	3.9	8.7	7.4	8.0	175.4	217	2	158	.77
1972			42.9		16.8	21.7	3.9	14.6	4.6	7.6	6.9	8.2	151.5	207	3	160	.77
1973[3]		1.1	19.7	.6	8.2	13.3	2.1	8.4	3.1	5.1	2.7	3.2	78.9	216	2	165	.79
1974		1.8	19.6	1.2	7.5	13.3	1.9	7.9	3.1	6.4	3.2	3.3	80.9				.80
1975		1.8	18.3	2.0	6.8	12.9	1.7	8.4	2.7	2.4	2.2	4.0	72.3				.80
1976		2.1	21.1	3.0	8.0	11.6	3.2	10.7	2.0	1.3	4.1	4.8	82.2				.81
1977		4.9	16.6	4.2	12.3	14.7	3.4	9.5	2.3	3.0	5.6	5.7	92.1				.90
1978	2.0	6.7	14.0	2.9	1.7	10.7	3.2	8.2	1.4	4.1	4.2	3.0	68.8				.70
1979	3.5	7.0	14.7	6.5	5.9	11.2	2.9	9.4	2.4	4.7	2.5	2.3	79.2				.70
1980	2.8	10.3	12.2	8.0	4.2	13.9	2.5	6.8	5.0	5.9	2.1	3.1	83.8				.68
1981	3.5	10.0	13.0	7.1	4.7	14.7	2.5	5.5	4.2	7.7	2.4	4.2	86.3				
1982	3.5	12.2	12.4	6.9	2.9	14.0	2.4	6.9	4.0	6.1	1.4	3.8	82.8				
1983[1]	3.9	15.1	8.1	6.4	2.9	14.4	1.8	4.5	3.5	4.7	1.3	3.5	77.3				

[1] Preliminary. [2] Imports prior to 1973 are in MILLIONS OF POUNDS. *Sources: Statistical Reporting Service, U.S.D.A.; Bureau of Census*

T.675

United States Imports of Tea In Thousands of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	13,226	12,360	15,073	18,078	15,128	16,529	20,150	25,141	19,427	4,631	3,828	11,862	175,432
1972	12,914	16,907	10,276	10,165	12,885	16,563	10,835	11,581	12,830	14,348	11,460	10,731	151,495
1973	15,481	14,295	15,399	14,107	17,423	12,425	13,660	12,614	12,527	16,878	16,506	11,997	173,314
1974	11,675	14,974	16,583	17,177	18,122	17,489	21,788	16,432	13,954	10,460	7,735	11,844	178,326
1975	14,297	12,200	15,486	13,648	14,694	12,170	9,915	11,276	12,404	17,594	13,940	11,843	159,287
1976	11,842	12,309	15,779	15,805	13,053	13,893	14,259	15,051	19,224	15,683	16,133	18,273	181,304
1977	16,059	15,064	22,389	23,302	27,345	22,335	22,252	15,932	9,994	9,702	7,213	10,924	203,012
1978	9,023	12,791	18,648	15,450	17,523	8,286	13,141	13,788	9,390	12,502	8,877	12,332	151,751
1979	14,797	10,568	15,584	13,822	13,556	14,352	13,361	14,809	15,841	16,992	15,432	15,578	174,690
1980	18,749	17,562	17,456	18,501	15,871	16,460	14,099	11,883	11,870	14,271	12,126	15,936	184,786
1981	12,891	18,354	14,696	19,220	18,990	17,736	14,586	19,128	13,205	15,855	13,473	12,121	190,254
1982	15,055	15,464	13,787	13,176	16,518	14,309	14,286	15,598	17,425	16,207	18,222	12,567	182,613
1983	13,748	15,092	14,170	15,799	16,018	10,931	12,159	11,747	15,025	16,531	13,600	15,631	170,451
1984	15,599	15,956	20,235	18,031	17,516	12,803	22,283	12,023	14,169	20,946	12,386	12,585	194,562
1985													

Source: Department of Commerce

T.679

N.Y. Wholesale Price of Tea (Black)[1] In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	48.1	47.8	48.8	48.1	48.3	47.7	48.1	48.1	49.7	49.5	49.6	50.7	48.7
1972	50.3	50.8	53.0	53.5	53.5	52.1	51.0	49.1	49.6	49.5	47.8	47.6	50.7
1973	46.8	47.9	48.6	48.8	48.9	48.2	48.7	48.8	48.0	48.0	48.0	48.3	48.3
1974	49.1	50.4	58.2	62.7	62.3	64.7	63.8	64.9	64.4	65.3	66.9	71.4	62.0
1975	71.3	73.9	75.5	72.1	69.4	68.7	65.3	65.0	63.6	65.4	65.9	66.4	68.5
1976	66.1	66.7	67.3	67.1	68.2	71.4	75.9	82.4	81.7	81.3	80.3	82.5	74.2
1977	N.A.	99.9	136.8	211.4	191.6	157.9	144.2	136.0	129.4	116.1	116.8	112.1	141.1
1978	109.9	122.1	121.5	115.1	110.4	109.4	109.6	108.8	107.4	110.3	110.5	106.6	118.8
1979	108.9	107.0	105.3	102.1	99.9	96.4	97.5	97.8	102.0	105.9	103.3	101.8	102.3
1980	103.9	108.9	110.3	110.0	109.3	106.3	106.6	107.1	107.8	N.A.	104.6	103.6	107.1
1981	103.3	107.3	108.4	108.9	106.8	106.3	104.3	103.7	100.4	99.3	99.6	99.5	104.0
1982	96.7	98.3	99.6	97.8	98.3	99.8	101.0	101.9	104.3	106.2	107.0	107.6	101.5
1983	111.7	112.8	112.6	111.3	111.5	114.4	112.3	114.0	122.8	125.1	157.6	153.8	121.7
1984	197.6	178.8	180.0	181.6	178.1	160.1	155.7	153.5	165.9	170.0	163.2	160.7	170.4
1985	153.9	142.8											

[1] Medium broken grade from Ceylon & India; ex-dock or ex-warehouse. *Source: Bureau of Labor Statistics* (0191–0331.02)

T.676

Tin

World mine production of tin in 1984 was marginally below 1983 output, according to a preliminary estimate of the U.S. Bureau of Mines. Malaysia remained the world's largest producer, accounting for 19 percent of estimated total production, followed by the Soviet Union—17 percent; and Indonesia and Bolivia—each with about 12 percent of the total; and Thailand—nearly 10 percent. U.S. production of tin is negligible, but about 25 percent of the tin consumed in the U.S. is derived from secondary material at 5 detinning plants and 196 secondary nonferrous metal processing plants, most of which are located in the East.

About 79 percent of apparent U.S. tin consumption is accounted for by net imports. U.S. imports of tin metal for consumption in 1984 increased 21 percent from the 1983 level and imports of concentrates (tin content), which are much less important than metal imports tripled in 1984. Imports of concentrates from Peru, which had dropped sharply in 1983, increased significantly in 1984 and accounted for about 76 percent of total concentrate imports. Brazil accounted for the largest share of tin metal imports into the U.S. in 1984—25 percent, and were more than double imports in the preceding year. Thailand, which previously had been the major supplier of tin metal to the U.S., slipped to second place in 1984, accounting for 23 percent of total imports, followed by Malaysia and Bolivia with 16 and 13 percent, respectively.

Reported U.S. consumption of primary tin increased nearly 13 percent in 1984 and secondary tin consumption increased 4 percent. The estimated major uses for tin in 1984 were cans and containers—21 percent; electrical—18 percent; construction—14 percent; transportation—14 percent; and other uses—33 percent. The major finished products were solder and tinplate, which accounted for 28 and 25 percent respectively, of reported consumption of tin by finished product.

U.S. industry stocks of tin at the end of December 1984 were about 16 percent higher than a year earlier.

The amount of tin in the U.S. stockpile continued well above the 42,674 tonne goal, with total inventory on November 11, 1984 amounting to 188,320 tonnes. The General Services Administration (GSA) continued its daily fixed-price sales of Government stockpile tin throughout 1984. Since the daily sales program began on December 1, 1980, a total of 12,997 tonnes had been sold despite continued objections by producer countries in the International Tin Council (ITC). The GSA opted to continue in 1985 its program of upgrading certain stockpile ores to ferroalloys.

The International Tin Council continued the imposition of export controls on member producing countries in an attempt to balance world tin supply and demand. The support price remained at 29.15 Malaysian dollars a kilogram, and the ceiling at 37.89 Malaysian dollars. The ITC has acquired a stockpile of an estimated 70,000 tonnes of tin in its largely successful efforts to maintain prices around the support level. However, because of tin smuggling into Singapore from some southeast Asia nations, and increasing production by non-members (Brazil in particular) the task of the ITC in supporting prices has become greater. It is estimated that its members' share of world production has been reduced to about 60 percent from over 70 percent four years ago. In addition, the consumption outlook is not constructive, with world consumption of tinplate predicted to fall by an average annual rate of some 2 percent over the next five years. Significant declines are expected in the amount of tin needed for tinplate in the U.S., the European Community, and Japan, while some gain may be made elsewhere in the world.

The average *Metals Week* composite price for tin in 1984 declined from a monthly high of $6.38 per pound in June, to $5.99 in December. Although demand increased slowly throughout the year, an estimated 80,000 tonne worldwide excess of supply relative to demand kept prices within a modest range.

Futures Market

Tin futures (Standard contract) and (High-Grade contract) are traded on the London Metal Exchange.

World Mine Production of Tin (Content of Ore) In Thousands of Metric Tons

Year	Australia	Bolivia[1]	Brazil	USSR	China[3]	Zaire (Congo)	Indonesia	Japan	Malaysia	Nigeria	Rwanda	South Africa	Thailand	United Kingdom	World Total
1980	11.6	27.3	6.9	36.0	14.6	3.2	32.5	.5	61.4	2.6	2.1	2.9	33.7	3.0	247.3
1981	12.3	29.8	8.3	36.0	15.0	3.3	35.4	.6	59.9	2.3	1.8	2.8	31.5	3.9	253.1
1982	12.1	26.8	9.5	37.0	15.0	3.1	33.8	.5	52.3	1.2	1.7	3.0	26.1	4.2	237.2
1983[2]	9.7	24.4	12.0	37.0	15.0	3.2	27.0	.6	42.0	1.0	1.5	2.7	20.0	4.1	211.6
1984[3]	9.0	25.0	14.0	35.0	16.0	3.0	26.0		40.0	1.2			20.0	4.0	209.0

[1] Exports. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines* T.682

World Smelter Production of Tin In Thousands of Metric Tons

Year	Australia	Belgium	Bolivia	Brazil	China	Zaire (Congo)	W. Germany	Indonesia	Japan	Malaysia	Nigeria	Portugal	South Africa	Un. Kingdom	United States[1]	USSR	Total
1980	4.8	2.8	18.2	8.8	14.6	.5	2.3	30.5	1.3	71.3	2.7	.9	1.1	5.8	3.0	36.0	249.2
1981	4.3	.1	20.0	7.6	15.0	.5	1.8	32.4	1.3	70.3	2.5	.9	2.1	6.8	2.0	36.0	247.8
1982	3.1	—	19.0	9.3	15.0	.4	.6	29.8	1.3	69.0	2.8	.4	2.8	8.2	3.5	37.0	239.2
1983[2]	2.9	—	15.5	13.0	15.0	.2	.5	29.3	1.3	65.0	2.3	.2	2.4	6.3	2.5	37.0	222.0

[1] Imports into the U.S. of tin concentrates (tin content). [2] Preliminary. *Source: Bureau of Mines* T.683

Tin Foreign Trade of the United States In Metric[5] Tons

		Imports (For Consumption)															
		Concentrates[3] (Ore)			Bars, Blocks, Pigs, etc.[4] (Metal)												
Year	Exports (Metal[2])	Total All Ore	Bolivia	Peru	Total All Metal	Thailand	Belgium	Indonesia	Malaysia	Australia	Singapore	United Kingdom	Bolivia	Brazil	China	Nigeria
1976	2,338	5,733	5,733	—	45,055	6,885	—	4,972	26,981	—	15	284	1,978	—	—	—
1977	5,480	6,724	6,667	—	47,774	7,780	—	5,294	27,084	—	207	513	3,358	2,380	381	2
1978	4,692	3,873	3,541	—	46,776	6,865	155	5,664	23,928	—	230	468	5,768	1,810	1,571	—
1979	569	4,529	3,745	—	48,355	10,440	100	5,429	23,448	—	1,070	550	5,387	933	185	—
1980	595	840	528	—	45,982	12,414	190	6,477	15,548	145	864	416	5,597	2,031	858	770
1981	2,361	232	—	232	45,874	11,967	—	7,096	13,163	552	656	46	8,277	1,129	2,032	520
1982	5,769	1,961	192	1,416	27,939	9,116	10	5,744	2,364	334	600	55	4,340	2,409	2,632	124
1983[1]	1,340	969	257	341	34,048	7,436	45	6,004	4,704	390	1,029	18	5,739	5,604	1,938	265
1984[1]	1,506	3,273	271	2,502	41,223	9,529	137	4,986	6,623	287	781	583	5,440	10,222	1,640	60

[1] Preliminary. [2] Ingots, Pigs & Bars. Excludes re-exports from 1979. [3] Tin content. [4] Also grain, or granulated. *Source: Department of Commerce*

T.684

United States Tin (Pig) Consumption (Total) In Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	5,170	4,930	5,825	5,415	5,490	5,965	5,240	5,380	5,680	6,395	5,950	5,700	62,928
1977	5,600	5,500	6,800	5,800	5,800	6,000	5,200	5,800	5,900	5,400	5,000	5,100	60,732
1978	5,400	5,000	5,500	5,200	5,700	5,400	4,600	5,200	5,200	5,300	5,400	4,900	61,531
1979	5,400	5,500	6,400	5,400	5,400	5,300	4,900	4,900	5,000	5,500	5,000	4,600	62,465
1980	5,500	5,300	5,750	5,300	4,600	4,100	3,700	3,900	4,150	4,300	4,050	3,750	56,362
1981	4,300	4,400	4,100	4,600	4,400	4,350	3,900	4,200	3,950	3,900	3,400	2,950	54,373
1982	3,400	3,300	3,750	5,100	5,000	5,100	4,900	4,700	4,700	4,600	4,500	4,400	53,450
1983[1]	4,400	4,700	4,900	4,700	4,700	4,800	4,300	4,600	4,700	4,800	4,400	4,800	55,800
1984	4,600	4,300	5,300	3,900	4,500	4,400	4,100	4,400	4,100	4,000			

[1] Preliminary. *Source: Bureau of Mines.*

T.681

United States Tin Stocks (Pig—Industrial) In Metric Tons

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1976	9,642	9,395	8,624	9,189	7,855	6,963	8,375	9,623	8,749	7,871	7,929	7,213
1977	7,282	8,032	7,883	5,874	6,157	5,644	4,720	6,305	5,557	5,378	9,124	7,272
1978	8,441	7,626	6,628	6,291	7,785	8,139	7,846	7,817	7,260	5,774	4,975	5,666
1979	5,040	4,594	4,254	5,891	6,097	5,938	6,317	6,270	6,096	5,058	4,901	4,244
1980	4,238	7,720	6,882	7,527	5,443	7,263	6,592	6,544	6,051	5,180	5,208	5,086
1981	5,504	5,968	5,745	5,229	5,725	5,978	6,227	6,465	5,663	5,710	5,325	5,563
1982	5,988	3,872	3,490	3,829	5,222	4,953	4,653	3,888	2,910	2,940	2,970	3,437
1983[1]	3,152	4,609	3,513	3,815	4,026	3,527	3,634	3,931	4,091	3,604	3,074	3,180
1984[1]	3,020	2,963	2,268	2,840	2,646	3,119	2,795	2,688	2,837	2,495	2,512	

[1] Preliminary. *Source: Bureau of Mines*

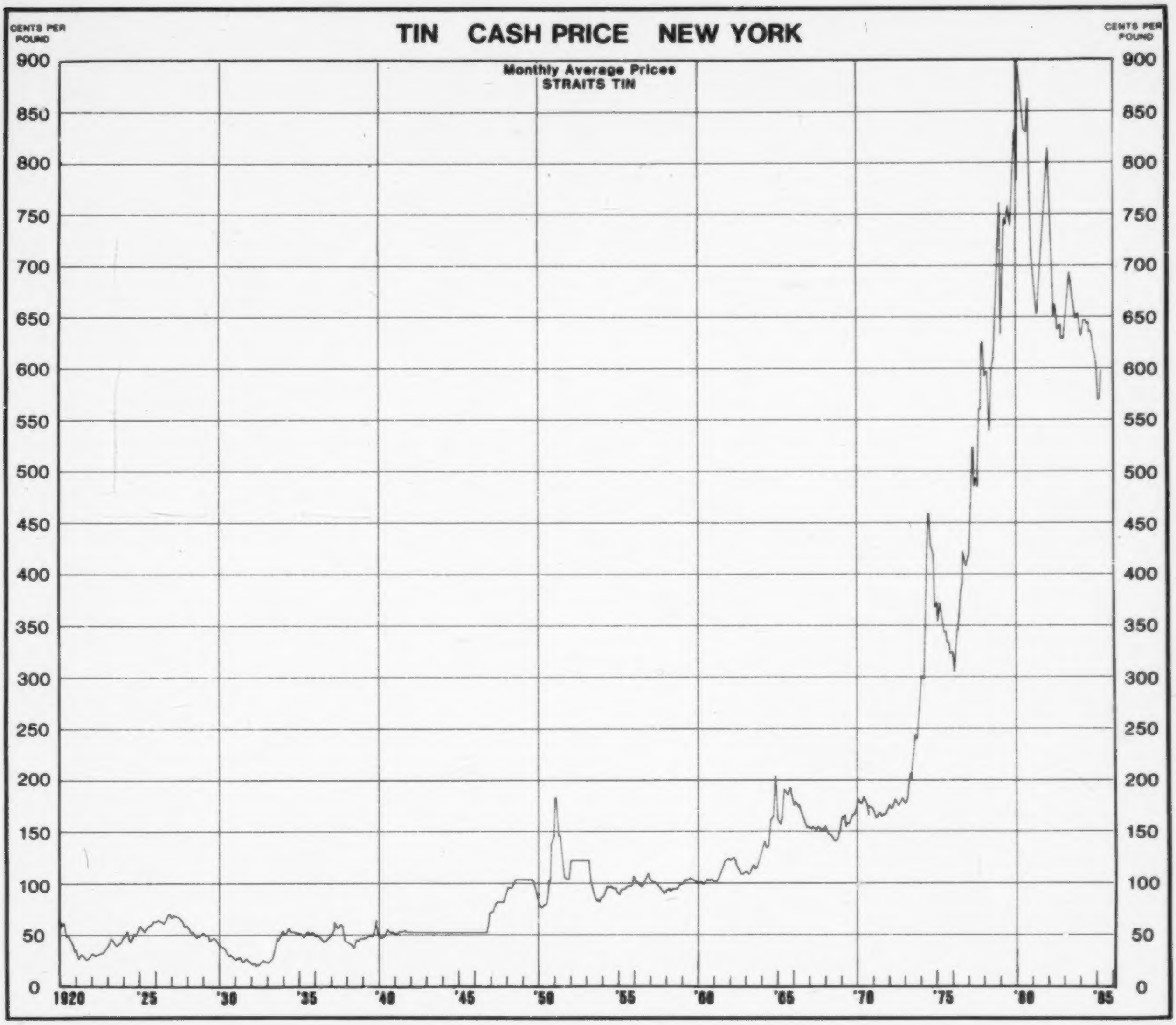
T.680

Secondary Tin Recovered in the United States In Metric Tons

	Tin Recovered at Detinning Plants						Tin Recovered by Form of Recovery								
		Tin Recovered													
Year	Tinplate Scrap Treated (Ths. Tons)	As Metal	In Compounds[2]	Total	Weight of Tin Compounds Produced	Avg. Quantity of Tin Recov. Per Ton of Tin-Scrap (Kilog.)	Tin Metal	Bronze & Brass	Solder	Type Metal	Babbitt	Anti-Monial Lead	Chemical Compounds	Misc.[3]	Grand Total
1976	685.5	1,195	424	1,619	1,348	2.36	1,467	8,319	4,513	668	495	548	424	12	16,446
1977	667.4	1,376	365	1,741	1,516	2.61	1,668	10,397	4,094	708	694	565	365	12	18,503
1978	714.9	1,324	463	1,787	1,803	2.50	1,565	12,419	4,363	1,038	521	712	463	19	21,100
1979	841.4	1,536	433	1,969	1,256	2.34	1,767	12,090	5,282	584	441	867	433	29	21,493
1980	766.9	1,457	321	1,778	1,533	2.32	1,703	10,402	4,423	525	378	856	321	30	18,638
1981	668.0	1,328	265	1,593	1,220	2.38	1,587	8,894	3,035	576	261	791	265	29	15,438
1982	464.6	810	447	1,257	1,754	2.37	1,067	6,971	2,723	222	237	1,015	447	101	12,783
1983[1]	486.5	928	182	1,110	1,284	1.98	1,180	6,684	3,072	172	185	803	182	94	12,372

[1] Preliminary. [2] Tin content. [3] Includes foil, cable lead & terne metal. *Source: Bureau of Mines*

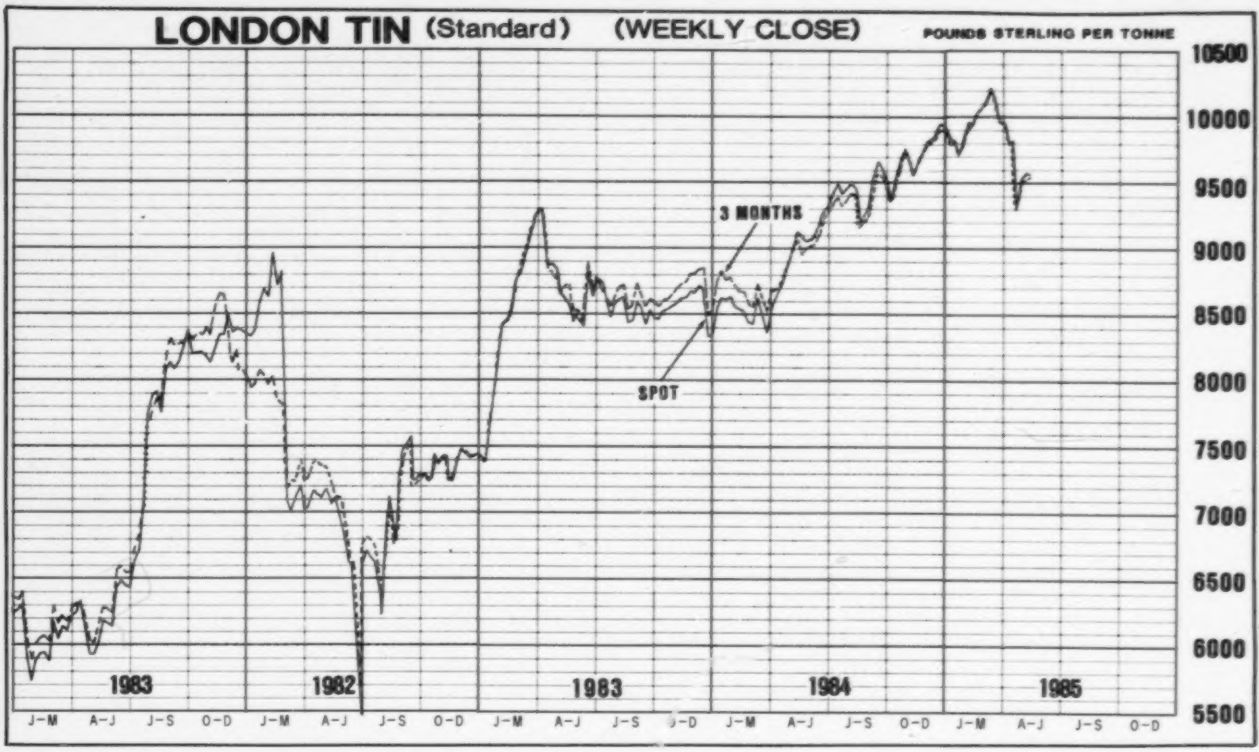
T.687



Average Price of Straits Tin (Alloyer Price[1]) in New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	171.31	172.00	179.81	181.98	177.92	175.03	176.61	179.12	181.99	180.40	177.21	176.25	177.47
1973	179.05	192.00	205.90	202.44	209.11	212.27	237.55	243.45	239.50	245.91	262.44	300.99	227.48
1974	298.14	351.54	389.43	440.77	456.88	458.50	426.61	422.99	415.92	365.33	370.96	351.87	395.75
1975	363.76	372.03	366.04	354.10	342.54	342.48	333.32	331.85	322.77	321.95	324.03	303.02	339.83
1976[1]	312.39	326.00	349.07	358.80	377.00	390.30	424.27	411.27	405.40	406.77	414.84	423.25	383.34
1977	470.54	514.16	522.97	485.28	491.93	482.15	518.71	559.51	558.47	619.25	626.16	613.36	538.76
1978	591.19	595.93	557.48	537.85	570.58	600.95	606.21	641.80	679.66	739.69	758.84	695.86	631.34
1979	684.56	724.57	746.14	740.06	745.18	760.14	712.31	739.93	762.03	785.54	801.23	830.88	756.87
1980	836.46	866.39	900.23	872.21	861.84	845.19	836.95	834.61	861.92	832.92	788.67	751.36	840.73
1981	739.94	705.76	691.70	677.38	652.07	652.77	680.22	746.06	777.36	798.70	813.00	801.59	728.05
1982	787.41	749.93	669.51	649.58	662.35	643.00	638.00	636.33	644.33	627.94	627.93	630.18	663.88
1983	648.90	653.89	669.18	692.29	683.36	670.54	663.13	653.10	649.31	650.65	653.02	636.71	660.34
1984	631.89	633.46	645.65	647.52	643.81	644.35	635.01	636.32	631.53	619.08	614.63	605.71	632.41
1985	580.06	569.29											

[1] Prices prior to 1976 are for PROMPT DELIVERY. *Source: American Metal Market* T.685



U.S. Consumption of Primary and Secondary Tin In Metric Tons

Year	Net Import Reliance as a % of Apparent Consumption	Industry Stocks Jan. 1[3]	Net Receipts Primary	Net Receipts Secondary	Net Receipts Scrap	Net Receipts Total	Available Supply	Industry Stocks Dec. 31	Total Processed	Consumed in Mfg. Pdt's.
1976	85	19,510	49,995	2,019	10,189	62,203	81,713	16,894	64,819	62,928
1977	82	16,894	48,215	4,025	10,604	62,844	79,738	16,858	62,880	60,732
1978	79	16,858	46,821	2,541	10,499	59,861	76,719	13,584	63,135	61,531
1979	80	13,584	50,126	2,636	10,659	63,421	77,005	7,075	64,067	62,465
1980	79	7,075	43,545	2,461	7,709	53,715	60,790	8,835	57,197	56,362
1981	77	8,835	41,162	5,692	8,050	54,904	63,739	8,717	55,099	54,373
1982	68	8,717	35,843	6,507	7,830	50,180	58,897	7,549	46,569	46,295
1983	73	7,549	36,494	5,412	7,435	49,341			45,792	45,547
1984[2]	79	9,859								

[1] Preliminary. [2] Estimated. [3] Includes tin in transit in the U.S. *Source: Bureau of Mines* T.686

Consumption of Tin in the United States by Finished Products In Metric Tons of Contained Tin

Year	Alloys	Tin-plate[2]	Solder	Babbitt	Bronze & Brass	Collap. Tubes & Foil	Tinning	Chemi-cals[3]	Tin Powder	Type Metal	Bar Tin & Anodes	White Metal	Other	Total Primary	Total Secondary
1976		20,766	17,728	2,423	7,656	694	2,308	5,621	1,208	216	758	2,347		51,767	11,161
1977		18,539	17,315	2,093	8,606	787	2,323	5,727	1,287	202	578	1,655		47,596	13,136
1978		17,280	17,770	2,346	9,048	673	2,431	4,557	1,360	171	424	1,484		48,403	13,128
1979	2,428	17,929	18,022	2,243	8,690	686	2,584	4,797	1,435	140	567	1,258	1,686	49,496	12,969
1980	134	16,346	15,618	2,380	7,478	526	2,577	N.A.	1,109	N.A.	486	914	8,794	44,342	12,020
1981	2,435	13,306	15,799	3,844	7,041	561	2,491	4,417	983	52	455	1,201	1,788	40,229	14,144
1982	N.A.	11,134	13,142	1,915	4,400	N.A.	1,887	N.A.	906	N.A.	509	1,177	11,225	33,019	13,276
1983[1]	N.A.	9,462	14,120	2,881	4,583	N.A.	1,759	N.A.	793	N.A.	654	937	10,358	34,301	11,246
1984[4]		8,556	9,538	1,914	3,307		1,329		934		319	420	8,362	38,700	11,700

[1] Preliminary. [2] Includes small quantity of secondary pig tin & tin acquired in chemicals. [3] Including tin oxide. [4] Estimated. *Source: Bureau of Mines* T.688

Titanium

Titanium metal, due to its high strength-to-weight ratio and resistance to corrosion, is an important strategic and critical material. It is widely used for high performance military and civilian aircraft (in airframes and engines), for powerplant surface condensers, and a wide variety of chemical processing and handling equipment.

Titanium dioxide, because of its whiteness, high refractive index, and resulting light-scattering ability, is the predominant white pigment for paints, paper, plastics, rubber, and many other materials.

Estimated U.S. production of titanium sponge in 1984 was 74 percent higher than in 1983 and at the year-end was about 85 percent of capacity. Ingot production was nearly 50 percent higher than a year earlier. Production gains were in response to significant improvement in consumption. Sponge production in 1985 is estimated at 25,000 tons.

A recovery in demand resulted primarily from increased orders for commercial and military aircraft, particularly for the B-1 bomber. Domestic consumption of titanium sponge rose 54 percent, scrap use was up 49 percent, ingot consumption increased 53 percent, and mill net shipments were up 46 percent in 1984 compared with 1983 tonnage.

In 1984, about 60 percent of the titanium metal was used in jet engines, airframes, and space and missile applications. About 20 percent was used in the chemical processing industry, power generation, and in marine and ordnance uses, and 20 percent in steel and other alloys. The Bureau of Mines estimated 1985 domestic apparent consumption of titanium sponge at 28,000 tons.

U.S. imports of titanium sponge in 1984 were double those of 1983, and scrap imports were up 18 percent. Exports, mostly scrap, ingot, slab, sheet bar, etc., were off 6 percent in 1984.

Domestic stocks at the end of 1984 were 6 percent above the year-earlier level. Most categories showed little change, but ingot stocks showed a 39 percent gain. As of November 30, 1984, the National Defense Stockpile goal was 195,000 tons of titanium sponge and inventory about 25,965 tons.

Estimated U.S. production of titanium dioxide in 1984 was 5 percent higher than in 1983, according to preliminary U.S. Bureau of Mines data. Imports for consumption, which exceeded exports by 82 percent, increased 11 percent in 1984. Exports increased 16 percent in 1984.

U.S. apparent consumption of titanium dioxide increased 3 percent in 1984. Uses for titanium dioxide in 1984 were as follows: paints, lacquers, and varnishes—50 percent; paper—26 percent; plastics—13 percent; rubber—2 percent; ceramics—1 percent; other uses—8 percent.

The Bureau of Mines estimates 1985 U.S. apparent consumption of titanium dioxide pigment at 920,000 tons compared with estimated production of 820,000 tons. From a 1981 base, demand for titanium pigment is expected to increase at an average annual rate of about 2 percent through 1990. This compares with an expected 5 percent average annual rate of increase for titanium sponge in the same period.

Sales of titanium sponge metal in 1984 were reported to be mostly in the range of $3.75 to $4.50 per pound. Sales prices of titanium dioxide pigment reportedly increased to about 7 percent below list.

Average Titanium Prices in the United States

Year	Ilmenite—54% T_iO_2 F.O.B. Atlantic Seaboard—$ per Long Ton	Slag, 85% T_iO_2 F.O.B. Richards Bay, South Africa $ Lg. Ton	Ilmenite Domestic F.O.B. Titen, Fla. — $ per Long Ton —	Rutile F.O.B. Atlantic & Great Lakes Ports, Last Quarter (Spot) $ per Short Ton	Synthetic F.O.B. Mobile, Ala. — $ per Short Ton —	— Dec. 31 in $ per pound —		
						Titanium Metal Sponge	Titanium Dioxide Pigments Anatase	Titanium Dioxide Rutile
1976	55			510		2.70	0.410	0.465
1977	55			360		2.98	0.435	0.485
1978	50			340		3.28	0.460	0.510
1979	50		—	390		3.98	0.530	0.590
1980	55		—	440	310	7.02	0.570	0.630
1981	70–75		39	450–475	340	7.65	0.690	0.750
1982	70–75	170–180	44–45	450–475	350	5.55–5.85	0.690	0.750
1983	70–75	170–180	44–45	400–430	350	5.55	0.69.0	0.750
1984[1]	70–75	200	44–45	460–490	350	5.55	0.690	0.750

[1] Preliminary. *Source: U.S. Bureau of Mines* T.690

World Production of Titanium Ilmenite Concentrates[2] In Thousands of Short Tons

Year	Australia (Shipments)	Canada[2]	Sri Lanka (Ceylon)	Finland	India	Japan[3]	Malaysia (Exports)	Norway	Brazil	USSR	China	South Africa[3]	United States[4]	World Total[2]
1976	1,071	897.4	61.5	135.1	90.0	3.8	198.4	845.1	16.1	420.0	—	—	652.4	4,391
1977	1,139	763.2	37.6	137.5	151.4	1.4	169.4	913.3	14.6	440.0	—	—	638.5	4,418
1978	1,383	937.0	36.4	145.4	178.1	.2	205.9	845.5	22.1	450.0	N.A.	100.0	589.8	4,912
1979	1,327	525.8	61.0	131.9	161.9	.2	220.3	903.7	14.5	450.0	N.A.	316.0	639.3	4,752
1980	1,553	964.2	37.4	175.3	185.1	N.A.	208.5	912.5	18.6	460.0	N.A.	379.0	556.6	5,450
1981	1,478	836.9	88.2	178.0	179.1	N.A.	190.4	724.9	16.6	470.0	150.0	408.0	542.4	5,262
1982	1,289	737.0	75.3	185.0	168.5	N.A.	114.6	608.2	17.0	475.0	150.0	420.0	263.4	4,503
1983[1]	984.8	675.0	90.1	176.4	165.0	N.A.	209.0	599.7	17.0	480.0	154.0	420.0	N.A.	3,971
1985[6]	1,130	770	90	170	200		120	730	17	475	150	420		4,272

[1] Preliminary. [2] Includes Ti slag containing approx. 70% TiO_2. [3] Represents titanium slag. [4] Includes a mixed product containing ilmenite, leucoxene, & rutile. [5] Includes slag & concentrate. [6] Estimate. *Source: Bureau of Mines* T.692

World Production of Titanium Rutile Concentrates In Short Tons

Year	South Africa	Australia	USSR	Brazil	Sierra Leone	India	Sri Lanka (Ceylon)	United States	World Total
1976	—	429,625	10,000	56	—	4,000	1,145	N.A.	444,826
1977	5,000	358,561	10,000	141	—	6,053	1,078	N.A.	380,833
1978	20,000	283,376	10,000	402	—	6,239	12,673	N.A.	332,690
1979	46,000	302,620	11,000	484	8,267	5,445	16,176	N.A.	389,992
1980	53,000	343,639	11,000	472	52,356	5,908	14,097	N.A.	480,472
1981	55,000	254,432	11,000	190	55,992	7,397	14,662	N.A.	398,673
1982	52,000	243,277	11,000	220	52,590	7,400	7,950	N.A.	374,437
1983[1]	62,000	190,000	11,000	220	79,146	7,700	8,921	N.A.	358,987
1984[2]	60,000	210,000			95,000	9,000	10,000	N.A.	395,000

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines* T.691

World Production of Titanium Sponge Metal & U.S. Consumption of Titanium Concentrates In Short Tons

	Production of Titanium Sponge Metal[1]						U.S. Consumption of Titanium Concentrates, by Products						
							Ilmenite (TiO_2 Content)			Rutile (TiO_2 Content)			
Year	China	USSR	Un. Kingdom	Japan	United States	Total	Pigments	Misc.	Total	Welding Rod Coatings	Pigments	Misc.	Total
1976			2,100	6,995	14,000	—	490,845	7,168	498,013	7,736	194,950	20,926	223,612
1977		39,000	2,400	7,049	N.A.	—	514,429	6,765	521,194	8,184	136,191	29,465	173,840
1978		39,000	2,400	10,115	N.A.	—	467,410	8,038	475,448	8,427	195,431	41,326	245,184
1979		43,000	2,600	14,000	N.A.	—	475,342	11,886	478,228	9,947	230,776	52,189	292,912
1980		45,000	2,600	21,257	N.A.	—	502,108	11,207	513,315	6,876	211,599	59,407	277,882
1981	2,000	42,000	2,600	27,500	26,419	100,519	501,301	9,721	511,022	6,944	192,779	66,873	266,596
1982	1,500	44,000	2,600	18,600	15,600	82,300	345,618	6,775	352,393	5,275	184,403	35,435	225,113
1983[3]	2,000	45,000	2,000	11,600	13,966	74,000	468,279	6,006	474,285	3,649	210,949	35,820	250,418
1984	2,000	46,000	3,000	18,000	23,000	92,000							

[1] Unconsolidated metal in various forms. [2] Estimated. [3] Preliminary. *Source: Bureau of Mines* T.689

Salient Statistics of Titanium[4] in the United States In Short Tons

	Ilmenite				Titanium Slag			Rutile		Exports of Titanium Products			
Year	Production (Gross Wt.)	Shipments (TiO_2)	Imports[3]	Stocks Dec. 31 (TiO_2)	Consumption (TiO_2)	Imports[3]	Stocks (TiO_2)	Imports[3]	Stocks Dec. 31 (TiO_2)	Ores & Concentrates	Scrap	Dioxide & Pigments	Ingots, Billets, Etc.
1975	717,281	404,269	122,010	378,181	104,585	212,682	62,130	224,499	131,742	3,147	4,326	15,807	1,900
1976	652,404	374,989	168,402	429,801	144,506	171,624	70,242	281,712	143,243	4,802	6,144	20,580	1,065
1977	638,503	331,139	334,990	494,658	106,201	150,564	44,464	123,800	136,935	22,679	3,394	16,336	1,050
1978	589,751	352,842	308,671	510,430	91,490	149,172	75,097	289,617	172,685	N.A.	5,453	39,341	1,340
1979	639,292	389,535	184,478	462,415	106,346	111,210	56,917	283,479	119,947	9,903	4,967	51,456	1,984
1980	556,646	358,181	357,488	584,280	133,933	194,994	127,981	281,605	147,670	17,830	3,300	45,795	3,278
1981	542,357	310,854	236,217	543,114	186,020	268,825	150,706	202,373	153,770	7,297	3,280	62,432	4,203
1982	263,391	145,725	348,366	470,776	168,433	247,845	103,667	163,325	165,762	21,682	4,287	74,122	2,196
1983[1]	N.A.	N.A.	259,328	299,260	127,267	138,708	61,026	111,578	122,188	4,391	5,379	91,702	1,371
1984[2]			409,605			209,839		158,466		8,651	4,109	106,124	2,071

[1] Preliminary. [2] Estimate. [3] For consumption. [4] Natural & synthetic. *Source: Bureau of Mines* T.693

Tobacco

U.S. tobacco production in 1984 was estimated to be 22 percent over 1983's drought-reduced crop but 12 percent below the 1982 crop. Effective quotas on flue-cured tobacco were lower in 1984 compared with the previous year, and burley quotas were higher. Total acreage in 1984 was 1 percent over a year earlier, but was the next to the lowest area planted since 1889. Average yields for all tobaccos were up 20 percent in 1984, and quality was generally improved. Record prices for tobacco in 1984 averaged 4 cents a pound above the 1983 level. The volume of tobacco placed under loan was below the 1983 season level, but 1984 loan receipts were expected to exceed 400 million pounds with a record level of loan holdings. Higher prices and a larger crop were expected to make 1984 cash receipts higher than in 1983.

Late in 1984, the Flue-Cured Tobacco Cooperative Stabilization Corporation announced the offering of reduced prices for loan stock tobacco. Discounts of 50 to 90 percent off established base prices were offered on 1976 through 1981 crops, the older crops having the largest discounts. Prices for 1982–84 tobacco were discounted by 10 percent. In order to obtain the large discounts for older tobacco (1976–81), purchasers were obliged to buy from newer tobacco (1982–84) at a ratio of 2 pounds of newer tobacco to 1 lb. of older. By early December, nearly 77 million lbs. of tobacco had been sold under this program.

Under the Dairy and Tobacco Adjustment Act of 1983, support prices for all by burley tobacco are allowed to increase only if the 3-year moving average of prices paid by farmers increases more than 5 percent. Burley support prices for 1985 were to be determined by this formula, and it was expected that burley support prices could rise by 3–3½ percent. However, under the No-Net-Cost Tobacco Program Act of 1982 the Secretary of Agriculture was empowered to hold the increase to 65 percent of the increase as determined by the basic formula. This could mean an increase of only around 2 percent.

For tobacco marketed in 1984, required contributions to the no-net-cost fund ranged from 2 to 9 cents per pound. The contribution varied between 2 and 3 cents for fire- and dark air-cured types and between 2 and 8 cents for most cigar types. For burley, the contribution was 9 cents and 7 cents for flue-cured tobacco.

Although carry-in stocks of flue-cured tobacco were about 2 percent under the 1983 level, the larger crop kept the 1984 flue-cured supply at 3.01 billion pounds, 1½ percent under a year earlier. Marketings of flue-cured were 1 percent below the 1983 level. Harvested acreage was down by 4 percent but yield was 8 percent higher. In December 1984, the USDA announced a national flue-cured tobacco quota of 775 million pounds for 1985. This represented a 3.7 percent reduction from 1984 which was intended to balance supplies with usage. Consideration of the base quota minus estimated net overmarketings meant that effective 1985 quotas for flue-cured could be 755 million pounds, or 9 percent under 1984.

In the year ended September 30, 1984, burley disappearance totaled 501 million pounds, 13 percent under the previous year and 21 percent under the 1979 record high. Burley supply in the 1984 season was estimated at 2.04 billion pounds (estimated marketings plus carryover), 11 percent above a year earlier. The 1984 crop was estimated at 740 million pounds, 41 percent above the previous year's marketings. It was also estimated that 700 million pounds would be marketed due to marketing quota restrictions. Burley carryover, estimated in late 1984, rose 2 percent above a year earlier despite the reduced 1983 crop due to a sharp rise in loan stocks. Loan holdings of burley were expected to reach an all-time high of over 500 million pounds because of large takings from the 1984 crop, and 1984/85 supplies of burley were estimated at nearly quadruple probable disappearance. Manufacturers and dealers increased their holdings of foreign-grown burley to 282 million pounds, 11 million more than a year earlier.

The 1984 fire-cured tobacco crop was estimated at 52 million pounds, 14½ million (39 percent) larger than a year earlier. This increase raised the 1984/85 supply of fire-cured to 124 million pounds. Disappearance of fire-cured types in 1983/84 was 44 million pounds, or nearly 2 million below the previous season. The 1984 crop of dark air-cured tobacco was estimated at 18.2 million pounds, up 3.5 million from the 1983 level due to increased acreage and higher yields. The 1984/85 supply of dark air-cured and sun-cured tobacco, at 62.3 million pounds, was 3.8 million above 1983/84. Disappearance of dark air-cured types during 1983/84 was 14.4 million pounds, 1.9 million lower than the previous marketing year.

World Production of Leaf Tobacco In Thousands of Metric Tons (Farm Sales–Weight[3])

Year	United States	Brazil	Canada	China	USSR	France	Greece	India	Indonesia	Italy	Japan	Pakistan[4]	Philippines	Turkey	World Total[1]
1975	994.0	285.6	106.1	959.8	298.0	56.3	118.2	394.8	82.2	113.4	165.7	78.0	66.3	208.6	5,369
1976	971.0	276.1	81.5	1,370	318.0	61.4	140.0	349.8	88.4	108.6	176.2	60.7	89.0	324.0	6,038
1977	870.0	310.0	104.3	1,389	307.0	43.6	118.9	418.8	83.7	109.7	173.2	72.6	84.3	248.0	5,892
1978	919.8	330.0	115.6	1,452	282.0	50.5	130.3	493.6	82.5	109.7	172.0	76.3	79.2	292.6	6,097
1979	693.3	401.0	78.9	941.4	301.0	50.6	127.2	453.8	141.2	136.6	153.3	69.9	85.3	214.3	5,701
1980	810.9	364.0	107.9	844.8	289.0	46.5	116.8	438.5	185.5	125.5	141.4	71.0	78.2	228.3	5,199
1981	936.3	325.0	112.4	1,497	273.0	42.8	127.4	440.8	109.7	131.0	137.7	67.6	80.9	168.0	5,939
1982	904.7	378.0	70.2	2,179	307.0	44.5	132.4	525.3	116.9	143.5	139.4	68.3	90.4	214.0	6,872
1983[2]	648.2	378.0	110.6	1,500	310.0	34.5	115.2	515.0	121.7	140.0	138.2	64.2	91.7	220.5	5,982
1984[1]	791.1														

[1] Estimated. [2] Preliminary. [3] Farm–Sales–weight is about 10% above dry weight which is normally reported in trade statistics. [4] Bangladesh (Formerly East Paskistan) excluded from 1972 to date. *Source: Foreign Agricultural Service, U.S.D.A.* T.694

Production and Consumption of Tobacco Products in the United States

Year	Production: Chewing Tobacco: Plug (Million Pounds)	Twist	Loose-leaf	Total	Cigarettes (Billion)	Cigars[2] (Billion)	Smoking Tobacco (Million Lbs.)	Snuff (Million Lbs.)	Consumption[3] Per Capita[4]: Cigars[2] (Number)	Cigarettes (Number)	Cigars[2] (Pounds)	Cigarettes (Pounds)	Smoking Tobacco (Pounds)	Chewing Tobacco (Pounds)	Total Pdt.'s (Pounds)
1977	16.4	2.2	61.3	90.0	665.9	3.93	40.7	24.6	67.9	4,051	1.13	7.21	.65		8.49
1978	15.9	2.1	64.6	94.6	695.9	3.80	36.4	25.1	63.4	3,967	1.05	6.89	.60		8.10
1979	15.3	2.0	71.7	102.3	704.4	3.60	32.8	23.7	56.0	3,861	.92	7.00	.51		8.12
1980	17.3	1.9	72.1	106.0	714.1	3.45	32.2	24.3	51.1	3,851	.84	6.79	.48		7.98
1981	17.9	1.8	70.3	90.0[5]	736.5	3.43	30.3	42.5[5]	48.9	3,840	.81	6.53	.46	1.13	7.60
1982	15.7	1.7	73.0	90.4	694.2	3.20	28.3	43.8	45.3	3,746	.74	6.47	.42	1.09	7.49
1983	14.1	1.7	71.0	86.8	667.0	3.14	28.0	46.7	43.9	3,494	.72	6.25	.41	1.06	7.24
1984[1]	12.9	1.4	73.5	87.8	655.0	3.10	24.2	48.3	43.9	3,411	.72	6.07	.35	1.04	7.04

[1] Preliminary. [2] Large cigars & cigarillos. [3] Consumption of tax-paid tobacco products; Represents unstemmed equivalent of tobacco used in the manufacture of these products. [4] 18 years old & over. [5] New classifications. *Sources: Bureau of the Census; Internal Revenue Service*

T.695

Production of Tobacco in the United States In Millions of Pounds

Year	Conn.	Florida	Georgia	Indiana	Kentucky	Maryland	Massachusetts	North Car.	Ohio	Pa.	South Car.	Tenn.	Virginia	Wisconsin	W. Virg.
1977	5.6	24.8	134.9	16.6	452.0	30.1	1.9	744.5	22.7	26.2	138.7	136.7	143.0	24.4	3.2
1978	5.0	22.1	125.7	15.5	469.7	30.6	1.5	849.7	22.5	25.2	150.5	142.1	135.2	20.3	2.7
1979	4.9	23.2	101.0	11.9	343.1	22.0	1.5	621.4	14.1	17.7	117.7	104.8	109.6	25.1	1.7
1980	5.3	20.4	110.6	16.8	420.7	25.3	1.9	762.4	20.0	24.7	125.5	111.9	106.9	26.0	1.8
1981	5.6	22.8	121.0	18.8	509.6	33.0	2.0	795.9	22.9	27.3	149.6	161.5	157.8	26.4	2.4
1982	4.2	21.0	105.6	20.2	589.4	37.5	.9	700.7	31.9	25.9	124.2	178.2	125.4	20.1	3.6
1983	3.4	17.6	96.4	13.0	324.6	29.7	.8	546.9	17.7	22.0	112.9	118.2	99.1	16.7	3.8
1984[1]	2.9	17.8	85.8	20.4	535.5	31.2	.8	592.5	26.8	22.4	106.3	158.7	117.2	15.7	4.0

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

T.696

Salient Statistics of Tobacco in the United States

Year	Acres Harvested 1,000 Acres	Yield Per Acre Lbs.	Production Million Lbs.	Farm Price ¢ Lb.	Farm Value Mil. $	Tobacco (July–June) Exports[2] Mil. Lbs.	Tobacco (July–June) Imports[3] Mil. Lbs.	U.S. Exports of Cigarettes Millions	U.S. Exports of Cigars & Cheroots Millions	U.S. Exports of Chewing Tobacco & Snuff Metric Tons[6]	U.S. Exports of Smoking Tobacco[7] Metric Tons[6]	Stocks of Leaf Tobacco[4] All Types Jan. 1 Billion Pounds	April 1	July 1	Oct. 1
1977	966	1,982	1,914	118.6	2,268	617.0	335.7	66,845	107	43	4,844	4,798	4,797	4,431	4,710
1978	964	2,101	2,025	132.4	2,679	671.9	359.7	74,359	166	47	1,578	5,008	4,781	4,451	4,728
1979	827	1,845	1,527	141.1	2,154	617.4	398.1	79,717	177	43	10,634	5,071	4,914	4,518	4,740
1980	920.5	1,940	1,786	152.3	2,720	553.4	439.8	81,998	354	124	3,250	4,974	4,608	4,284	4,548
1981	976.0	2,114	2,064	170.6	3,520	584.9	384.9	82,582	181	191	3,588	4,850	4,617	4,285	4,697
1982	912.7	2,185	1,994	176.4	3,517	526.5	434.0	73,585	181	887	5,493	5,080	4,983	4,675	5,034
1983[1]	789.2	1,811	1,429	174.7	2,495	519.8	515.9	60,697	130	1,073	4,069	5,371	5,288	4,900	5,209
1984[1]	797.4	2,187	1,744	178.5	3,081			54,500	115			5,357	5,210	4,987	5,186
1985[1]												5,444			

[1] Preliminary. [2] Domestic. [3] For consumption. [4] Owned by dealer & mfgrs., converted to a farm-sales weight equivalent. [5] Farmers' intentions to plant, MARCH 1. [6] Data prior to 1975 are in THOUSANDS OF POUNDS. [7] In packages & in bulk. *Source: Agricultural Marketing Service, U.S.D.A.*

T.700

Tobacco Production in the U.S., by Types In Million Pounds (Farm–Sales Weight)

Types	11–14	31	32	21	22–23	35–36	37	41	42–44	72	51–52	54–55	61
1977	1,130	617	30.1	7.2	45.2	20.4	.8	26.2	3.6	.1	2.5	24.4	5.3
1978	1,232	626	30.6	6.8	51.4	22.2	.9	25.2	3.0	.1	2.6	20.3	3.8
1979	946	446	22.0	5.4	39.6	16.1	.6	17.7	2.0	.1	2.4	25.1	4.0
1980	1,086	561	26.2	3.6	32.7	16.2	.4	24.7	2.4	.1	2.6	26.0	4.5
1981	1,170	730	46.4	5.2	32.4	15.7	.7	27.3	2.4	.1	3.5	26.4	4.1
1982	1,006	822	42.0	5.5	47.7	19.9	.7	21.4	3.5		3.5	20.1	1.6
1983	821	481	37.4	4.6	32.5	14.3	.4	14.2	1.9		2.5	16.7	1.7
1984[1]	865	732	38.9	5.8	47.8	17.5	.6	14.6	2.0		1.9	15.7	1.8

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.701

U.S. Exports of Unmanufactured Tobacco In Millions of Pounds (Declared Weight)

Year	Australia	Belg.-Luxem.	Denmark	Egypt	France	W. Germany	Thailand	Ireland	Japan	Netherlands	Norway	Italy	Sweden	Switzerland	United Kingdom	Total U.S. Exports
1977	14.2	10.4	16.9		6.3	78.9	16.0	5.4	135.4	30.5	6.0	40.6	11.8	28.8	46.8	628.6
1978	12.4	16.9	27.1	24.5	9.8	53.2	18.2	5.3	102.3	34.2	4.2	41.0	17.5	26.2	148.8	700.0
1979	12.4	5.4	16.4	3.8	11.5	67.7	18.8	6.9	95.9	29.3	5.7	34.8	13.7	19.3	68.2	567.4
1980	13.4	7.9	17.5	17.4	4.5	100.7	22.6	3.6	82.1	44.9	6.8	30.7	15.4	20.1	32.5	598.7
1981	12.6	9.5	11.1	16.1	6.1	83.2	18.4	3.9	117.0	28.6	4.2	26.5	9.9	22.2	39.4	584.5
1982	10.1	15.2	16.8	22.0	5.3	68.2	27.7	4.7	110.3	25.1	3.6	28.1	8.7	26.7	30.7	572.0
1983[1]	9.7	9.6	20.2	21.6	7.3	58.0	9.1	3.2	114.1	28.4	5.7	32.2	12.4	16.8	27.8	524.4

[1] Preliminary. *Source: Bureau of the Census* T.702

U.S. Salient Statistics for Flue-Cured Tobacco (Types 11–14)

Crop Year	Acres Harvested 1,000	Yield Acre 100 Lbs.	Production	Stocks, July 1	Total Supply	Exports	Dom. Disappearance	Total Disappearance	Farm Price ¢ Lb.	Crop Value Mil. $	Parity Price[2]	Price Support Level	Placed Under Gov't. Loan	Under Loan July 1
			Millions of Pounds								¢ Lb.		Mil. Lb.	
1977	589.3	19.2	1,124	2,075	3,199	539	608	1,147	117.6	1,329	162.0	113.8	195.6	556.9
1978	602.1	20.5	1,206	2,052	3,258	599	584	1,183	135.0	1,663	176.0	121.0	64.1	534.0
1979	502.8	18.8	946	2,075	3,021	520	563	1,083	140.0	1,324	203.0	129.3	72.0	564.0
1980	555.1	19.6	1,086	1,965	3,052	509	530	1,039	144.5	1,569	222.0	141.5	137.2	554.4
1981	540.6	21.6	1,144	2,013	3,157	523	489	1,012	166.4	1,947		158.7	105.9	595.8
1982	472.3	21.3	1,007	2,145	3,139	456	479	935	178.5	1,797		169.9	259.9	518.7
1983–4[1]	409.8	20.0	821	2,205	3,060	453	442	894	177.9	1,461		169.9	194.8	688.4
1984–5[3]	394.0	22.0	865	2,165	3,011	450	435	885	181.0	1,566		169.9	159.2	797.5

[1] Preliminary. [2] As of applicable date when support level was computed. [3] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.* T.697

U.S. Salient Statistics for Burley Tobacco (Type 31)

Crop Year	Acres Harvested 1,000	Yield Per Acre 100 Lbs.	Production	Stocks, Oct. 1	Total Supply	Exports	Dom. Disappearance	Total Disappearance	Farm Price ¢ Lb.	Crop Value Mil. $	Parity Price[2]	Support Level	Placed Under Gov't. Loan	Under Loan on Oct. 1
			Millions of Pounds								¢ Lb.		Mil. Lb.	
1977	268.6	23.0	613	1,217	1,830	117	495	611	120.0	741	166.0	117.3	57.0	54.9
1978	261.4	24.0	618	1,218	1,836	121	503	624	131.2	822	184.0	124.7	67.7	113.5
1979	238.1	18.7	446	1,212	1,658	133	499	632	145.2	700	210.0	133.3	7.3	155.4
1980	276.6	20.3	558	1,026	1,583	106	478	583	165.9	930	236.0	145.9	.0	66.3
1981	331.2	22.0	726	1,000	1,726	141	464	605	180.7	1,318		163.6	.8	0
1982	346.2	23.7	822	1,121	1,898	135	444	579	181.0	1,488		175.1	269.2	.7
1983–4[1]	292.6	16.5	481	1,319	1,845	112	389	501	177.3	853		175.1	255.6	226.1
1984–5[3]	318.3	23.0	732	1,344	2,044	145	395	540	187.6	1,373		175.1	113.4	377.2

[1] Preliminary. [2] As of applicable date when support level was computed. [3] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.* T.698

Exports[1] of Tobacco from the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1977	76.8	53.0	54.7	31.3	38.0	41.5	49.7	47.5	66.3	17.9	49.5	102.4	628.6
1978	52.5	55.6	73.2	40.9	32.3	29.2	42.7	52.3	41.3	85.8	95.8	86.3	687.8
1979	35.6	50.1	57.1	51.8	42.2	25.3	38.0	29.5	30.1	41.6	78.9	81.5	561.8
1980	28.0	52.5	80.1	54.6	53.2	43.0	40.9	28.3	32.3	47.6	64.4	66.6	591.5
1981	44.8	32.8	53.7	49.4	44.6	40.1	31.3	27.4	45.5	63.2	86.8	55.6	575.3
1982	31.7	39.4	62.1	41.8	54.0	37.2	23.9	30.2	24.8	74.5	92.2	50.5	562.3
1983[2]	24.2	38.3	46.0	44.0	33.6	32.7	28.6	36.0	26.4	51.7	87.9	60.3	509.8
1984[2]	42.0	40.2	43.3	32.4	26.5	28.9	14.8	18.4	39.1	68.0	97.9		

[1] Represents unmanufactured tobacco, including stems, trimmings and scrap. [2] Preliminary. *Source: Department of Commerce* T.699

Tung Oil

Tung oil is an industrial oil produced from tung nuts, a tree crop, and is used as a lubricant and also as a drying oil.

Estimated 1983/84 world production totaled about 95,000 metric tons, 9 percent below 1982/83 output, according to *Oil World*. The People's Republic of China accounts for around three-quarters of estimated world production. Argentina and Paraguay are also producers and exporters of tung oil.

World exports of tung oil were estimated at 34,000 tonnes, about 19 percent below the 1982/83 total. World disappearance, a residual figure, was estimated at 97,000 tonnes, 5 percent lower than in 1982/83. Ending world stocks for 1983/84 were estimated at 14,000 tonnes versus 16,000 a year earlier.

U.S. consumption of tung oil in inedible products totaled about 16.7 million pounds in 1984, up nearly 32 percent from the year-earlier total. U.S. stocks of tung oil at the end of December 1984 were placed at 2.56 million pounds by the Bureau of Census, Department of Commerce, 19 percent below the 3.14 million pounds on hand a year earlier.

Supply and Distribution of Tung Oil in the United States In Thousands of Pounds

Year	Stocks Jan. 1	Production	Imports	Exports[2]	Total Supply	Appar. Disappearance	Factory Consumption (Crop Yr. Beg. Oct.) Total	Paint & Varnish	Resins & Plastics	Other Inedible Pods	Oil Acquired By CCC
1974	25,738	—	21,037	700	46,075	34,858	34,000				—
1975	11,217	—	30,063	1,700	39,580	33,228	43,000	26,000			—
1976[1]	6,352	—	34,509	1,600	39,261	36,961	25,000				—
1977[1]	2,300	—	18,821	1,200	19,900	16,900	20,100				
1978[3]	3,000		17,912				13,500	7,200	3,700	2,600	
1979[3]	1,200		20,038				15,700	10,400	3,000	2,300	
1980[3]	3,500		16,242				16,600	8,300	3,700	4,600	
1981[3]	2,800		15,036				14,600	5,800	3,200	5,600	
1982[3]	2,200		14,401				19,700	5,600	3,400	10,800	
1983[3]	2,217										
1984[3]	3,137										
1985[3]	2,546										

[1] Preliminary. [2] Also including re-exports. [3] Estimate. *Source: Economic Research Service, U.S.D.A.* T.703

U.S. Stocks of Tung Oil at Factories & Warehouses In Thousands of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1983	2,217	3,124	1,612	1,697	1,768	2,706	2,901	2,742	2,406	1,103	1,948	1,845
1984	3,137	2,867	3,042	2,634	2,609	2,102	1,815	1,802	1,476	1,192	2,113	2,029
1985[1]	2,546	2,589	2,340									

[1] Preliminary. *Source:* Bureau & the Census. T.703A

Average Price of Tung Oil[1] (Imported-Drums) F.O.B. New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct	Nov.	Dec.	Average
1973	15.5	15.5	15.5	15.5	17.1	20.0	N.A.	N.A.	31.0	31.2	33.8	35.0	23.0
1974	35.0	36.0	39.0	39.0	38.3	35.5	35.5	35.5	35.0	35.2	38.9	41.0	37.0
1975	41.0	41.0	41.0	41.0	41.0	41.0	41.0	35.4	32.2	33.0	33.0	33.0	37.8
1976	33.0	33.2	34.0	34.0	33.8	37.0	54.0	65.0	65.0	65.0	65.0	65.0	48.7
1977	65.5	72.7	97.0	142.4	147.0	147.0	128.2	100.0	100.0	100.0	100.0	100.0	108.3
1978	100.0	100.0	100.0	100.0	100.0	100.0	100.0	87.5	87.5	87.5	68.5	66.4	91.4
1979	68.9	68.9	67.9	69.0	69.0	69.0	69.0	69.0	62.5	55.0	51.0	51.0	64.2
1980	51.0	55.1	55.8	53.0	51.1	48.3	45.2	43.7	46.6	56.5	65.5	67.2	53.3
1981	69.6	68.0	64.0	60.3	62.9	64.5	64.0	64.0	62.1	60.3	58.5	58.5	63.1
1982	61.4	69.5	68.2	66.5	68.3	69.4	66.9	63.5	60.6	60.5	60.5	60.5	64.6
1983	60.5	57.0	57.0	61.9	86.4	102.5	102.5	107.3	133.4	136.0	138.0	138.0	98.4
1984	138.0	138.0	138.0	138.0	138.0	134.0	134.0	117.0					

[1] Carlots, imported, f.o.b. New York. *Source: Economic Research Service, U.S.D.A.* T.704

Tungsten

Estimated world production of tungsten in concentrate increased 11 percent in 1984, and world consumption increased 20 percent, according to the U.S. Bureau of Mines. More than 90 percent of the world's tungsten resources are located outside the U.S., with about 50 percent located in China.

Estimated U.S. mine production, as measured by mine shipments, rose 27 percent in 1984, even though two of the five major mines were temporarily closed at the end of November because of low prices. Mine capacity utilization was about 26 percent.

In 1984, U.S. net imports of tungsten in concentrate were the largest since 1957 and represented 66 percent of U.S. concentrate consumption.

U.S. reported consumption of tungsten in concentrate increased 66 percent in 1984 and consumption of intermediate products rose 38 percent. Demand for tungsten in cemented carbides, mill products, and steel increased substantially.

U.S. production of ammonium paratungsten/ (APT) rose 62 percent, consumption increased 49 percent and 1984 ending stocks rose 23 percent.

In December 1984, the Bureau of Mines patented a new process for producing tungsten carbide powder which could cut production costs by as much as 50 percent.

World Concentrate Production of Tunngsten In Metric Tons of Contained Tungsten[3]

Year	Japan	Argentina	Australia	Bolivia	Brazil	Burma	China	Rep. of Korea	Canada	Portugal	Spain	Thailand	USSR	United States	World Total
1981	667	12	3,517	2,779	1,248	825	13,500	2,739	1,993	1,395	437	1,209	8,850	3,605	49,011
1982[1]	640	17	2,618	2,534	1,100	844	12,500	2,420	2,842	1,358	545	855	9,000	1,521	45,305
1983[2]	488	17	2,060	2,400	1,200	930	12,500	2,293	327	1,360	550	562	9,100	1,016	38,918
1984[2]			2,000	2,600	1,000	1,000	12,500	2,400	3,200	1,400		800	9,100	1,300	43,200

[1] Preliminary. [2] Estimate. [3] Conversion Factors: WO_3 to W, multiply by 0.7931; 60% WO_3 to W, multiply by 0.4758. *Source: Bureau of Mines* T.706

Salient Statistics of Tungsten in the U.S. In Metric Tons of Contained Tungsten

			Consumption of Tungsten Products by End Uses											Stocks at End of Year (Concentrate)	
					Steel										
Year	Net Import Reliance as a % of Apparent Consumption	Production[1]	Shipments from Mines[1]	Total Consumption	Tool	Stainless & Heat Assisting	Alloy Steel[3]	Superalloys	Cutting & Wear Resistant Materials	Pdt's. Made from Metal Powder	Miscellaneous	Chemicals & Ceramic	Exports	Consumers & Dealers	Producers[1]
1980	53	2,754	2,738	9,268									920	601	48
1981	50	3,605	3,545	9,839									79	671	108
1982	42	1,521	1,575	4,506									305	1,765	54
1983[2]	52	980	1,016	5,181	196	46	12	215	4,097	1,553	220	71	1	1,085	47
1984[4]	71			5,339	445	41	21	129	1,926	2,142	475	97	2	959	

[1] Primary concentrates. [2] Preliminary. [3] Other than tool. [4] Estimate. *Source: Bureau of Mines* T.707

U.S. Imports[1] of Tungsten Ores and Concentrates and Ferrotungsten In Metric Tons[4] (Tungsten Content)

	Tungsten Ores and Concentrates Imported (For Consumption)												Ferrotungsten Imported			
Year	Australia	Bolivia	Brazil	Canada	South Korea	Mexico	Portugal	Spain	Thailand	Peru	Total 1,000 Pounds	Value Mil. $	Austria	Portugal	West Germany	Total 1,000 Lbs.
1980	235	2,794	63	2,914	19	515	576	94	1,046	526	11,372	87.1	68	10	17	446
1981	304	2,511	444	2,005	156	616	1,028	49	706	652	11,752	91.2	92	17	26	325
1982[4]	16	643	247	1,259	9	246	239	—	134	114	3,528	46.7	11	43	3	69
1983[2]	28	662	78	649	117	215	339	—	142	199	2,861	25.7	25	19	—	48
1984[3]											5,807					

[1] Imports for consumption. [2] Preliminary. [3] Estimate. [4] Data prior to 1982 are in thousands of pounds. *Source: Bureau of Mines* T.708

Tungsten Prices In U.S. Dollars

	Markets		Reported Value, F.O.B. U.S. Mine[2]				Markets		Reported Value, F.O.B. U.S. Mine[2]		
Year	U.S.[1]	European	Total (Mil. $)	Avg. per Unit of WO_3	Avg. per Kilogram of Tungsten	Year	U.S.[1]	European[1]	Total (Mil. $)	Avg. per Unit of WO_3	Avg. per Kilogram of Tungsten
1979	127.31	125.95	55.8	146.75	18.50	1982	106.00	107.00	22.1	111.06	14.00
1980	131.07	129.87	50.6	146.49	18.47	1983	85.00	81.00	10.5	82.17	10.36
1981	130.25	129.16	62.2	139.21	17.55	1984[3]	88.00	85.00			

[1] Conc., Stu WO_3, Average (a short ton unit [stu] of tungsten trioxide [WO_3] contains 15,862 pounds of tungsten). [2] Values apply to finished concentrate & are in some instances f.o.b. custom mill. [3] Preliminary. *Source: Bureau of Mines* T.709

Turkeys

Turkeys raised in the U.S. in 1984 totaled 171 million birds, virtually unchanged from 1983. Producers in the 20 major producing states intended to raise 174 million turkeys in 1985. Prices were forecast as holding above 1984 levels through mid-1985 and then weakening relative to 1984 due to increases in total meat supplies and in supplies of turkey meat.

During January-September 1984, the output of turkey meat from federally inspected plants totaled 1,796 million pounds, 8 million pounds below the 1983 level. The number of turkeys slaughtered was reported down by 2 percent, but average live weights were up by 2 percent. Considering the number of turkey poults placed that could be slaughtered in the fourth quarter of 1984, turkey meat output was expected to be roughly 1 percent under the 750 million pounds produced in 1983.

Due to higher prices for turkeys beginning in mid-1984 and to declining feed costs, the number of poults placed for domestic slaughter continued to increase through the last half of the year. Because net returns to producers were the highest since 1979, turkey producers were expected to expand meat production through 1985. The production of turkey meat in federally inspected plants was forecast as increasing by 10 to 12 percent over year-earlier levels in the first half of 1985 and by 6 to 8 percent in the second half of the year.

Stocks of frozen turkeys in commercial warehouses showed seasonal increases during 1984, but these gains were not as large as in previous years. Beginning stocks of whole turkey and turkey parts in the fourth quarter of 1984 were 10 percent under 432 million pounds stored in 1983. The low stock levels seen in 1983 were expected to prevail through the last quarter of 1984. Apparently, lowered production met with strong demand to result in excellent retail sales during the 1984 Thanksgiving season, and, therefore, ending stocks were expected to remain at a relatively low level. However, stocks of frozen turkeys and turkey parts were expected to approach the high levels seen in 1982 if turkey production moves upward according to most projections.

In the first half of 1984, prices for 8–16 pound hen turkeys in New York averaged 67 cents per pound, nearly 11 cents above year-earlier levels. Expected good retail demand for the holiday season took place at the same time that producers were slowing production seasonally. As a result, prices for turkeys climbed to an average of 72 cents in the third quarter of 1984 compared with 60 cents during the comparable period in 1983. By October and November of 1984, the prices for 8–16 pound hen turkeys were at record highs. Wholesale prices had been boosted by reports of a smaller turkey crop, and retailers were forced to bid for expected tighter supplies. At the same time, consumers responded well to retail featuring. Reports that supplies intended for the Christmas season were being drawn down to meet Thanksgiving demand spurred further increases in turkey prices. Prices in first-half 1985 for commodity pack turkeys in Eastern regions were expected to average 70–75 cents compared with 67 cents in 1984. Increasing turkey stocks and rising production in the second half of 1985, may force prices down to 65–69 cents per pound compared with nearly 80 cents in the comparable period in 1984.

Salient Statistics of Turkeys in the U.S.

	Breeder Hens on Farms—Dec. 1			(Liveweight)			Ready-to-Cook Basis						In Cents Per Lb.			
										Consumption			Production Costs Live-Weight		Wholesale Ready-to-Cook	
											Civilian					
Year	Number	$ Value Per Head	Raised	Produced Million Lbs.	Farm Price ¢ Lb.	Gross Income Million $	Production	Commercial Storage Jan. 1	Exports & Shipments	Military	Total	Per Capita Lb.	Feed	Total	Total Costs	3-City Composite Price
	In Millions						Million Pounds									
1972	3.3	6.46	128.7	2,424	22.2	537	1,909	223	42	42	1,840	8.9	13.5	20.5	34.1	35.8
1973	3.6	9.47	132.2	2,452	38.2	936	1,933	208	54	31	1,775	8.5	25.6	33.1	50.6	64.2
1974	2.9	9.81	131.9	2,437	28.0	683	1,921	281	43	14	1,870	8.9	22.5	30.7	48.8	45.6
1975	3.1	10.81	124.2	2,277	34.8	793	1,803	275	53	19	1,811	8.6	22.1	30.7	49.4	55.1
1976	3.1	11.13	140.0	2,605	31.7	825	2,059	195	71	18	1,961	9.2	22.4	31.4	50.9	51.0
1977	3.0	11.39	136.4	2,562	35.5	910	2,023	203	56	11	1,992	9.3	22.6	31.6	51.4	56.2
1978	3.4	12.53	138.9	2,653	43.6	1,157	2,098	168	57	15	2,019	9.2	22.1	31.7	51.7	68.8
1979	3.7	13.57	156.5	2,958	41.4	1,226	2,343	175	57	19	2,204	9.9	25.3	35.8	58.2	67.0
1980	3.7	14.11	164.9	3,069	41.3	1,268	2,425	240	81	16	2,370	10.5	26.1	37.1	61.0	66.0
1981	3.5	15.35	159.9	3,263	38.4	1,247	2,574	198	68	15	2,450	10.7	30.2	41.2	66.1	64.0
1982	3.4	14.60	164.5	3,155	39.5	1,246	2,522	238	56	12	2,489	10.8	24.5	36.3	60.1	63.6
1983[1]	3.2	17.59	170.7	3,316	36.5	1,210	2,635	204	54	13	2,609	11.2	26.6	39.8	65.4	63.5
1984[2]	3.2	16.54	171.3	3,500	46.9	1,642	2,565	162	36	16	2,524	10.8	29.0	42.0	69.0	72.0

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.* T.710

TURKEYS

Turkey Per Capita Consumption in the U.S. by Quarters In Pounds

Year	First	Second	Third	Fourth	Total	Year	First	Second	Third	Fourth	Total
1973	1.2	1.3	2.1	3.9	8.5	1979	1.5	1.9	2.3	4.2	9.9
1974	1.2	1.6	2.0	4.1	8.9	1980	1.8	2.0	2.7	4.0	10.5
1975	1.1	1.4	2.0	4.1	8.6	1981	1.6	1.9	2.5	4.6	10.7
1976	1.2	1.5	2.1	4.4	9.2	1982	1.8	2.1	2.6	4.3	10.7
1977	1.3	1.5	2.3	4.2	9.3	1983[1]	2.1	2.2	2.5	4.4	11.2
1978	1.3	1.7	2.2	4.0	9.2	1984[1]	1.9	2.2	2.6		

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.711

Wholesale Price of Turkeys[3] (Hens; 8–16 lbs.) N.Y. In Cents per Pound

													Yearly Average Price		
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.	4-Region Retail	Farm Price[2]
1973	45.1	48.6	56.0	57.7	60.6	67.8	69.4	81.1	86.0	84.2	80.2	71.2	67.3		34.8
1974	60.7	54.2	51.9	45.3	48.4	52.5	52.6	55.8	55.7	54.4	56.3	58.8	53.9		28.8
1975	59.0	56.7	55.9	52.0	52.6	56.5	59.5	61.8	64.3	66.8	69.9	70.0	60.3		34.8
1976	69.0	69.0	69.9	70.0	70.6	71.0	71.0	71.0	71.0	71.0	72.8	73.0	70.8		31.7
1977	72.5	70.2	68.8	68.8	69.0	70.1	72.1	73.2	73.6	74.6	75.5	78.2	72.2		35.5
1978	78.5	78.5	78.9	79.0	82.2	86.1	86.8	87.0	87.0	89.1	91.6	90.7	84.6		43.6
1979	91.0	90.8	90.0	89.5	90.9	91.0	91.0	91.5	91.4	93.1	94.5	92.9	91.5		41.9
1980[1]	62.3	57.8	56.8	54.1	53.3	55.5	63.3	67.2	74.5	77.0	75.0	67.0	63.6		40.0
1981	59.4	60.7	63.8	61.2	63.5	66.2	66.8	61.8	59.5	56.4	57.3	51.7	60.7	97.7	38.4
1982	53.6	55.8	56.0	55.8	58.8	61.8	64.1	64.1	68.0	69.6	67.2	54.2	60.8	92.6	39.5
1983	53.6	54.9	56.0	54.4	56.6	60.9	58.5	57.6	65.0	65.1	67.0	76.1	60.5	91.7	36.5
1984	72.2	64.7	66.1	67.0	66.8	67.0	68.6	72.4	76.2						

[1] Prior to 1980 prices are for frozen eviscerated tom turkeys (N.Y.C.); heaviest weights. [2] Live weight. [3] Ready-to-cook. *Source: Economic Research Service, U.S.D.A.* T.713

Certified Federally Inspected Turkey Slaughter in the U.S. In Millions of Lbs.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	97.3	59.8	58.9	80.1	113.2	159.7	213.1	237.2	220.2	261.1	215.2	119.9	1,836
1975	64.9	47.1	54.4	68.7	81.9	138.4	193.2	203.3	229.0	257.5	220.2	157.5	1,716
1976	76.3	61.7	68.6	79.9	106.5	182.2	213.9	243.8	252.8	256.6	261.5	146.4	1,950
1977	70.5	58.7	80.3	78.9	110.0	176.5	189.6	244.4	238.2	250.3	246.8	148.2	1,892
1978	81.8	59.7	86.3	80.8	129.3	189.5	199.9	248.8	230.9	271.2	248.9	156.3	1,983
1979	99.3	77.2	95.0	112.3	157.3	195.9	219.2	267.7	233.0	297.5	261.9	165.5	2,182
1980	378.6			528.3			711.6			713.9			2,232
1981	398.1			553.2			785.2			772.6			2,509
1982	410.4			527.9			761.5			759.1			2,459
1983	462.2			581.5			760.3			759.0			2,563
1984	432.3			589.0			774.9						

Source: Economic Research Service, U.S.D.A. T.714

Storage Stocks of Turkeys (Frozen) in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1973	208.1	188.4	152.6	115.4	91.3	88.1	137.1	199.4	261.2	350.7	450.5	321.1
1974	281.0	274.0	250.5	235.9	225.0	227.4	265.8	335.8	431.8	528.7	554.6	372.0
1975	275.0	267.1	239.9	207.3	180.2	162.7	193.2	248.6	328.6	409.8	472.4	286.2
1976	195.2	186.8	160.7	140.7	114.5	120.8	177.3	261.8	370.3	459.7	512.3	298.8
1977	203.4	190.3	167.8	142.3	130.3	138.2	201.4	253.6	329.9	409.3	444.5	269.4
1978	167.9	168.2	136.6	113.0	101.1	103.9	152.8	213.6	301.2	373.3	425.4	236.2
1979	175.1	170.7	154.7	135.7	128.0	153.1	200.9	272.5	382.5	432.3	445.5	281.2
1980	240.0	246.8	225.0	208.9	206.6	233.8	286.6	325.8	384.0	398.8	420.2	257.6
1981	198.0	208.3	207.9	220.7	228.7	256.2	327.3	400.8	466.0	532.1	528.1	305.1
1982	238.4	236.9	236.4	232.8	—	—	281.7	—	—	435.8	—	—
1983	203.9	193.8	187.7	185.3	192.3	210.5	255.7	323.5	384.3	432.2	460.1	251.6
1984[1]	161.8	161.5	145.8	149.4	142.2	180.9	226.3	278.2	331.0	390.6	415.4	195.7
1985[1]	125.3	125.4										

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.712

Uranium

The uranium market in recent years has not conformed to the traditional model of producers selling only to utilities and utilities buying only from producers. During the previous decade, contracting for uranium purchases was based on expectations of demand well into the future. However, many times these expectations did not fully materialize due to cancellations and deferrals of planned nuclear power plants. As a result, both uranium production capacity and utility inventories of uranium increased well beyond actual needs. These excess inventories had a major impact on the uranium market. Some U.S. and foreign utilities with cancelled or deferred reactor construction programs became active sellers, thus bringing about a secondary market for uranium. Also, as spot market prices dropped below production costs, an increasing number of producers began to purchase uranium on the spot market in order to meet their sales commitments. These secondary market transactions (producer-to-producer, utility-to-utility, and utility-to-producer sales, loans, and exchanges) would have to be considered for a total picture of the current uranium market. For example, domestic secondary market activity in 1982 totaled 5,700 tons in addition to the 17,600 tons delivered in 1982 in the primary market. Imported uranium, because it can be obtained either on the spot market or through long-term contracts at prices significantly lower than those offered by domestic producers, has become an important factor.

Early in 1984, the exchange value for uranium oxide (U308) fell sharply from $20.50 per pound to $17.50. At the beginning of the second quarter of 1984, the exchange value was recorded at $17.57 per pound. By that time, there had been no recent sales. The exchange value for U308 remained at $17.50–$17.75 per pound for most of the rest of 1984. However, in October 1984, the reported uranium exchange value moved down to $16 per pound. This was the first significant decline in several months and the lowest level recorded in five years.

A new utility services uranium enrichment contract was issued by the DOE on January 18, 1984. This was intended to permit electric utilities to match uranium enrichment requirements more closely with the operational requirements of their reactors. A side effect of this contract could be reduced projections of domestic natural uranium requirements. Until recently, the uranium enrichment complex operated by the DOE and predecessor agencies was the only source of enrichment services in the free world. This U.S. government monopoly position came to an end as some foreign countries developed their own enrichment capabilities.

Foreign uranium reserves are concentrated primarily in Australia, Canada, Namibia, Niger, and South Africa. U.S. contracts and options for uranium to be supplied by domestic producers from 1984 to 1988 were expected to exceed the projected mean level of domestic production. This reflected the fact that producers would tend to draw down their own inventories and purchase foreign uranium on the secondary market as more economic alternatives to production from their own deposits to meet supply contracts. The strong dollar aided this increasing reliance on foreign uranium during 1984.

Free-World Production of Uranium Oxide (U_3O_8) Concentrate In Thousands of Short Tons

Year	Argentina	Australia	Canada	Spain	Namibia	Gabon	France	Portugal	Niger	Brazil	Sweden	South Africa	United States	World Total
1979	.2	.9	8.9		5.0		3.1		4.7	0		6.2	18.7	49.6
1980	.2	2.0	9.3		5.3		3.4		5.3	0		8.0	21.8	57.2
1981	.2	3.7	10.0		5.2		3.3		5.7	.1		8.0	19.2	57.1
1962	.2	5.7	10.5		4.9		3.7		5.5	.4		7.6	13.4	53.7
1983[2]	.3	4.8	9.8		4.8		4.2		5.2	.4		7.5	10.6	49.3

[1] Less than 50 tons. [2] Preliminary. *Source: Bureau of Mines, Dept. of Energy*

T.720

Apparent Domestic Utility Uranium Market Requirements (Million Pounds U_3O_8 Equivalent)

Year	Utility Purchases From Domestic Suppliers[a] (1)	Direct Imports by Utilities (2)	Unfilled Requirements (3)	Apparent Market Requirements (1+2+3)	Reported Utility Enrichment Feed Deliveries[b]
1984	22.0	4.7	2.6	29.3	34.0
1985	22.1	4.7	2.3	29.1	39.8
1986	22.0	4.9	3.2	30.1	40.4
1987	21.7	3.9	5.3	30.9	31.8
1988	20.0	4.3	7.6	31.9	38.2

[a] These purchases exclude certain optional purchase commitments that are calculated to be in excess of reported utility desires. In addition, these quantities include foreign-origin uranium purchased by suppliers that will be delivered to domestic utilities. [b] Includes natural uranium required to satisfy the terms of "de-enrichment swaps," because a de-enrichment swap is transactionally identical to a purchase of enrichment services. *Source: Energy Information Administration.*

Average U.S. Contract Prices & Market Price Settlements as of 1/1/1984 (Year-of-Delivery $)

Year	Reported Price Per Pound of U_3O_8	Percent of Delivery Quantities With Reported Prices	Adjusted Price Per Pound of U_3O_8[a]
1983	38.21[b]	97	37.81
1984	46.42[b]	100	46.42[c]
1985	49.21	100	49.21[c]
1986	49.08	100	49.08[c]
1987	50.68	100	50.68[c]

[a] Adjusted price per pound includes estimates for prices not reported by the respondents. [b] Includes settlements of market price contracts. [c] Estimates of missing prices not required. *Source: Energy Information Administration.*

T.281

Vanadium

Estimated world production of vanadium increased nearly 7 percent in 1984 compared to a year earlier, according to preliminary data of the U.S. Bureau of Mines. For the second year, the USSR was the world's largest producer, accounting for 33 percent of the world total, displacing the Republic of South Africa, which accounted for 30 percent of the total, followed by China with 17 percent. Most of the vanadium produced outside the U.S. is obtained from the reduction of iron ores. Vanadium is usually produced as a byproduct or coproduct of another element such as iron, uranium, or phosphorus.

U.S. mine production of vanadium (recoverable basis) in 1984 was estimated to have increased 29 percent. Three firms produced vanadium oxides from domestic materials that included uranium-vanadium ores and ferrophosphorus slags. Three other firms produced oxides and/or ferrovanadium from petroleum residues, utility ash, spent catalysts, and imported iron slags.

Preliminary data of the Bureau of Mines indicated that total U.S. vanadium consumption in 1984 was about 40 percent greater than the 20-year low reported for 1983. Approximately 84 percent of the vanadium was consumed by the iron and steel industry as ferrovanadium, related vanadium-iron-carbon alloys, or as a vanadium oxide product. The chief use for vanadium in 1984 was as an alloying agent for iron and steel. It was also used extensively in the production of titanium alloys, and as a catalyst for production of sulfuric acid. Major end use distribution was about as follows: transportation—41 percent; machinery—25 percent; construction—20 percent; other uses—14 percent. The Bureau of Mines estimates 1985 U.S. domestic mine production at 6 million pounds, on a recoverable basis, and apparent consumption of 11 million pounds. From a 1981 base, demand for vanadium is expected to increase at an average annual rate of 3 percent through 1990.

The U.S. net reliance on imports is now about 41 percent of apparent consumption. There is very little vanadium recycled. U.S. imports of ferrovanadium increased 71 percent in 1984, with Canada again accounting for the largest share (39 percent). Imports of vanadium pentoxide dropped 61 percent following a sharp rise in 1983. Finland accounted for 93 percent of the total.

U.S. consumer stocks of vanadium (pounds of contained vanadium) were 20 percent higher at the end of 1984 than a year earlier. Stocks of ferrovanadium, which accounted for 78 percent of the total, increased 6 percent.

Vanadium is classified as a strategic and critical material because of its significant import dependence and essential use in equipment for defense, energy, and transportation. As of November 30, 1984, the National Stockpile goal was 15.4 million pounds of vanadium pentoxide, while the inventory amounted to only 1.218 million pounds. However, new stockpile specifications were recommended in 1984 because catalyst and master alloy production require a higher grade of material than is currently held by the Government. However, the existing inventory is regarded as suitable for producing ferrovanadium used in high-strength low-alloy steels. In addition, it was recommended that some ferrovanadium be included in the stockpile, which has a goal of 2.0 million pounds of contained vanadium for ferrovanadium but no inventory.

World Production of Vanadium from Ores and Concentrates In Short Tons (of Contained Vanadium)

Year	USSR	Chile	China	Finland	Australia	Norway	South West Africa[1]	South Africa	United States[1]	Other[4]	World Total
1978	10,000	760	2,200	3,092	—	510	485	12,400	4,272	1,697	35,416
1979	10,000	510	4,000	3,051	—	630	—	13,600	5,520	2,337	39,648
1980	10,500	300	5,000	3,135	—	540	—	14,000	4,806	2,230	40,511
1981	10,500	140	5,000	3,431	101	380	—	14,100	5,126	2,587	41,365
1982[2]	10,500	—	5,000	3,470	110	120	—	12,600	4,098	2,267	38,165
1983[3]	10,500	—	5,000	3,516	—	—	—	8,900	2,171	1,663	31,750
1984[3]	10,500		5,500	3,550				9,500	2,800		32,000

[1] Recoverable vanadium. [2] Preliminary. [3] Estimate. [4] Production from petroleum residues, ashes, & spent catalysts. Mainly in Japan & the United States. Source: *Bureau of Mines*

T.722

Salient Statistics of Vanadium in the United States In Short Tons of Contained Vanadium

	Vanadium in Ores & Concentrates		Prod. of Vanad. Pentoxide (V_2O_5)		Vanadium Consumed by Uses[2]										Exports	
Year	Mine Production	Recoverable Vanadium		Consumer Stocks Dec. 31	Tool Steel	Cast Irons	High Strength Low All.	Nonferrous Alloys	Chemicals	Carbon	Full Alloy	Total	$ Per Lb. Van. Pentoxide[3]	General Imports[5]	Ore & Concentrates[4]	Ferro-Vanadium (Gross Weight)
1978	4,446	4,272	9,290	974	858	59	2,440	467	123	1,051	1,506	6,630	3.17	2,234	1,721	1,309
1979	5,841	5,520	10,279	976	852	62	2,410	563	81	1,096	1,522	6,719	3.39	2,442	1,047	880
1980	5,832	4,806	9,829	879	653	54	1,986	728	59	1,114	1,420	6,139	3.54	1,786	960	803
1981	5,852	5,126	11,367	683	584	42	2,123	852	56	1,278	1,832	6,863	3.52	2,435	463	435
1982[1]	4,093	4,098	8,689	326	273	20	1,148	461	29	698	811	3,496	3.50	1,112	2,000	326
1983[6]	N.A.	2,171	4,344	374	426	10	966	505	19	577	716	3,277	3.50	58	2,802	775
1984[6]		2,800		821	561	12	1,618		20	671	805	4,423	3.50	1,461	4,029	938

[1] Preliminary. [2] Represent about 90% of the total consumption. [3] Dealer export. [4] Also includes fused vanadium oxide. [5] Ores, slags, residues. [6] Estimate. Source: *Bureau of Mines*

T.723

Wheat

A sharp drop in Australia's 1984 wheat harvest from the 1983 record crop reduced the Southern Hemisphere's 1984 production of wheat by about 8 percent. However, larger crops in major Northern Hemisphere areas such as the U.S., the EC, Eastern Europe, China, and India lifted the 1984 world wheat production to an all-time high of 514 million tonnes. Because of this increased global wheat output, world consumption was also expected to top 500 million tonnes for the first time. Despite increased production and use, however, the 1984/85 stocks carried over into 1985/86 were expected to be over 100 million tonnes, with nearly two-thirds in the storage silos of major exporters. The volume of world wheat trade for 1984/85 was expected to reach a record 107 million tonnes. A highly-priced competitive market caused purchasing nations to be readily able to switch buying from one exporter to another depending upon quotes. Influenced by the high value of the U.S. dollar, U.S. exports were not expected to expand as much as world trade. The U.S. share of the world wheat market was consequently expected to slip to the lowest in 13 years, or 37 percent.

Although the strong U.S. dollar tended to limit foreign demand for U.S. grain, the first half of the 1984/85 wheat market year began with a burst of export loading that was exceeded only by the record export season of 1982/83. Nearly 1.15 billion bushels went overseas from June through December 1984. Buying from the U.S.S.R., China, and Brazil expanded with Soviet purchases 2.5 times greater than a year ago, mainly in response to their extremely short 1984 wheat harvest. However, the continuing pressure of the value of the dollar pointed towards greater competition from Southern Hemisphere exporters and a slowing of U.S. wheat sales in the second half of the marketing year. A buyers' market caused some traditional U.S. customers to cancel purchases and switch to other sellers. Earlier estimates of a U.S. wheat export season as high as 1.58 billion bushels required a downward adjustment to 1.48 billion because of the likelihood of reduced sales until the end of the season.

January 1, 1985 U.S. wheat stocks totaled 2.14 billion bushels, an 8 percent drop from a year earlier. Even though 1984's increased production lifted the 1985 wheat supply to a record 4.0 billion bushels, accelerated early season exports combined with heavy use of wheat for livestock and poultry feeding cut sharply into that supply. A moderating export and domestic demand for the remainder of the season were expected to lead to year-end stocks of 1.42 billion bushels, only 99 million below 1982/83's record 1.5 billion.

A USDA announcement that 1984-crop wheat loans could be placed into the farmer-owned reserve (FOR) was expected to have little impact on the projection of "free" stocks at the end of 1984/85 because loan activity was down considerably from the previous season. Readily marketable supplies were nonetheless expected to still be lower, around 351 million bushels or 25 percent of the total year-end stocks compared with 600 million on June 1, 1984. The year's low prices resulted in slightly higher FOR stocks, while CCC inventories more than doubled, mainly through increased regular loan and FOR forfeitures. A new ruling that FOR contracts could not be extended was expected to lead to lower FOR stocks and an increase of CCC inventory to over 400 million bushels by June 1.

Despite major efforts to reduce wheat production in the U.S. over the past 3 years, supplies were still considered excessive. Program features for the 1985 U.S. wheat crop were announced in late June 1984. This program included the following major provisions: Growers who elected to participate in a 20 percent acreage reduction program (ARP) were also required to participate in a 10 percent paid land diversion program (PLD). This meant that participants could not plant 1985 wheat on more than 70 percent of their farms' wheat acreage base. This 30 percent of base acreage left idle was to be protected with soil conserving measures and cover crops that could not be harvested. The enrollment period began on October 15, 1984 and was extended to April 1, 1985. Signup contracts were to be binding, and, if broken, producers were to be assessed liquidated damages. Exceptions could be made if insufficient financing prevented a producer from following through on planting plans. Those who participated were to be protected by a target price of $4.38 a bushel and would be eligible for a price support loan of $3.30 a bushel. Early in 1985, analysts estimated that farmers accounting for 70 to 85 percent of U.S. base acreage would enroll in the 1985 wheat program compared with a participation of 60.76 percent in the previous year's program.

Futures Markets

Wheat futures in the U.S. are traded on the Chicago Board of Trade, the Kansas City Board of Trade, the Minneapolis Grain Exchange, and the Mid-America Commodity Exchange in Chicago.

World Production of Wheat In Thousands of Metric Tons

Crop Year	Argentina	Australia	Canada	China	France	W. Germany	India	Italy	Pakistan	Spain	Turkey	Un. Kingdom	USSR	United States	World Total[1]
1978-9	8,100	18,100	21,100	53,800	21,056	8,118	31,700	9,191	8,400	4,795	13,300	6,615	120,800	48,300	446,800
1979-0	8,100	16,200	17,200	62,700	19,544	8,061	35,500	8,980	9,900	4,082	13,000	7,169	90,200	58,080	423,700
1980-1	7,780	10,856	19,158	55,210	23,683	8,156	31,830	9,150	10,857	6,039	13,000	8,472	98,200	64,800	442,700
1981-2	8,300	16,400	24,803	59,640	22,882	8,314	36,313	8,828	11,473	3,408	13,200	8,710	80,000	75,800	448,500
1982-3	14,500	8,900	26,700	68,400	25,368	8,632	37,500	8,903	11,300	4,410	13,800	10,315	86,000	75,300	478,600
1983-4[2]	12,300	21,900	26,600	81,000	24,828	8,998	42,800	8,514	12,400	4,330	13,300	10,880	78,000	65,900	489,400
1984-5[1]	12,700	18,500	21,200	87,700	33,125	10,223	45,100	9,478	10,900	6,044	13,300	14,900	75,000	70,600	516,000

[1] Estimated. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.* T.724

WHEAT

World Wheat Supply & Demand In Millions of Metric Tons/Hectares

	Area Harvested	Yield	Production	World Trade	Utilization Total	Ending Stks	Stocks as % of Util
1980/81	236.4	1.87	442.7	94.1	445.6	78.2	17.6
1981/82	239.2	1.88	448.5	101.3	441.6	85.1	19.4
1982/83	238.5	2.01	478.6	98.6	467.1	96.6	21.0
1983/84[1]	228.8	2.14	489.4	103.7	484.2	101.8	21.3
1984/85[2]	231.7	2.23	516.0	106.2	504.4	113.4	22.7

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.* T.724a

Salient Statistics of Wheat in the United States

Crop Year	Planting Intentions —1,000 Acres—	Acreage Harvested Winter	Acreage Harvested Spring	Acreage Harvested All	Avg.—All Yield Per Acre In Bushels	Farm Disposition Used for Seed	Farm Disposition Fed to Livestock	Farm Disposition Sold	Value of Production Ths. $	Foreign Trade[5] Domestic Exports[2]	Foreign Trade[5] Imports[3]	Per Capita[1] Consumption Flour	Per Capita[1] Consumption Cereal
		1,000 Acres				(Million Bushels)				Million Bushels		In Pounds	
1979–0	71,424	43,427	19,027	62,454	34.2	87.6		2,046	8,070,378	1,375	2.1	117	2.9
1980–1	80,637	51,635	19,490	71,125	33.5	104.2		2,266	9,277,608	1,514	2.5	117	2.9
1981–2	88,928	58,476	22,166	80,642	34.5	Not Available			10,224,661	1,771	2.8	116	2.9
1982–3	87,427	57,633	20,304	77,937	35.5				10,165,300	1,509	7.6	114	2.9
1983–4[4]	76,817	47,584	13,806	61,390	39.4				9,815,800	1,429	4.0	116	
1984–5[4]	82,607	51,513	15,415	66,928	38.8				8,542,600	1,475	7.0		
1985–6[4]	74,652												

[1] Civilian only. [2] Includes flour milled from imported wheat. [3] Total wheat, flour & other products. [4] Preliminary. [5] Year beginning June. *Source: Economic Research Service, U.S.D.A.* T.728

Supply and Distribution of Wheat in the United States In Millions of Bushels

Crop Yr. Beginning June	Supply: Stocks, June 1 On Farms	Supply: Stocks, June 1 Mills, Elevators[3]	Supply: Total Stocks	Supply: Production	Supply: Imports[4]	Supply: Total Supply	Domestic Disappearance: Food	Domestic Disappearance: Seed	Domestic Disappearance: Industry	Domestic Disappearance: Feed Residual[5]	Domestic Disappearance: Feed (On Farms Where Grown)	Total Dom. Disap.	Exports[4]	Total Disappearance
1979–0	484.3	439.8	924.1	2,134.1	2.1	3,060	596.1	101.0	—	86.0		783.1	1,375.2	2,158
1980–1	376.5	525.5	902.0	2,380.9	2.5	3,285	610.5	113.0	—	59.0		782.5	1,513.8	2,296
1981–2	414.4	574.7	989.1	2,785.4	2.8	3,777	602.4	110.0	—	134.8		847.2	1,770.7	2,618
1982–3	576.2	583.2	1,159.4	2,765.0	7.6	3,932	616.4	97.0	—	194.9		908.3	1,508.6	2,417
1983–4[1]	668.9	846.1	1,515.1	2,419.8	4.0	3,939	635.5	100.0	—	376.2		1,111.7	1,428.6	2,540
1984–5[2]	591.7	806.7	1,398.6	2,595.5	7.0	4,001	645.0	90.0	—	375.0		1,110.0	1,475.0	2,585

[1] Preliminary. [2] Estimated. [3] Also warehouses and all off-farm storage not otherwise designated, including flour mills. [4] Imports & exports are for wheat, including flour & other products in terms of wheat. [5] Approximate feed use. *Source: Economic Research Service, U.S.D.A.* T.737

Stocks, Production, and Exports of Wheat, by Classes In Millions of Bushels

Year Beginning June	Hard Spring June 1 Stocks	Hard Spring Production	Hard Spring Exports[2]	Durum[3] June 1 Stocks	Durum[3] Production	Durum[3] Exports[2]	Hard Winter June 1 Stocks	Hard Winter Production	Hard Winter Exports[2]	Soft Red Winter June 1 Stocks	Soft Red Winter Production	Soft Red Winter Exports[2]	White June 1 Stocks	White Production	White Exports[2]
1979–0	320	363	217	86	106	83	423	1,089	725	27	317	154	68	259	196
1980–1	285	312	188	61	108	59	440	1,181	701	40	442	299	76	338	267
1981–2	257	464	205	60	183	82	541	1,112	754	38	678	460	93	348	270
1982–3	346	492	239	106	146	59	538	1,243	679	60	590	325	109	294	207
1983–4[1]	408	313	221	136	73	62	754	1,192	704	74	507	222	143	335	220
1984–5[4]	314	394	195	99	103	60	745	1,238	765	74	530	260	167	330	195

[1] Preliminary. [2] Includes flour made from U.S. wheat & shipments to territories. [3] Includes "Red Durum." [4] Estimate. *Source: Economic Research Service, U.S.D.A.* T.727

Seeded Acreage, Yield and Production of All Wheat in the United States

Year	Seeded Acreage—1,000,000 Acres Winter	Seeded Acreage Not Durum	Seeded Acreage Durum	Seeded Acreage All	Yield Per Harvested Acre—In Bushels Winter	Yield Not Durum	Yield Durum	Yield All	Production—1,000,000 Bushels Winter	Production Not Durum	Production Durum	Production All
1980	57.8	17.5	5.5	80.8	36.8	25.3	22.4	33.5	1,902.0	370.5	108.4	2,380.9
1981	65.5	16.9	5.8	88.3	35.9	30.6	32.4	34.5	2,097.1	505.3	183.0	2,785.4
1982	65.5	16.4	4.3	86.2	36.0	33.8	34.9	35.5	2,073.6	545.5	145.9	2,765.0
1983	62.1	11.7	2.6	76.4	41.8	31.7	29.3	39.4	1,988.3	358.5	73.0	2,419.8
1984[1]	63.4	12.5	3.3	79.2	40.0	35.4	32.1	38.8	2,060.6	431.4	103.4	2,595.5
1985[2]	57.6											

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.* T.726

Production of Winter Wheat in the United States In Millions of Bushels

Year	Colorado	Idaho	Illinois	Indiana	Kansas	Michigan	Missouri	Montana	Nebraska	Ohio	Oklahoma	Oregon	Pa.	Texas	Wash.	Total U.S.
1976	51.6	39.2	72.2	54.0	339.0	33.1	58.1	98.6	94.4	64.0	151.2	56.1	9.0	103.4	132.7	1,564.1
1977	56.1	32.4	67.5	55.8	344.9	33.0	68.6	81.2	103.3	72.4	175.5	45.2	8.9	117.5	95.2	1,540.4
1978	57.3	41.8	33.4	28.9	300.0	16.4	28.6	83.7	81.6	42.1	145.8	47.3	7.1	54.0	117.0	1,222.4
1979	67.6	35.7	53.8	44.4	410.4	31.6	70.4	57.4	86.7	63.4	216.6	48.0	7.3	138.0	94.6	1,601.2
1980	107.2	51.9	75.4	53.9	420.0	35.2	89.0	54.8	108.3	67.1	195.0	72.0	9.3	130.0	143.0	1,895.4
1981	83.9	55.7	92.5	62.1	305.0	41.5	115.5	89.3	104.4	72.6	172.8	73.2	9.7	183.4	161.3	2,103.5
1982	81.5	53.0	67.5	43.3	458.5	23.0	74.8	80.6	101.5	51.6	227.7	59.4	8.2	144.0	125.4	2,073.6
1983	117.0	55.6	64.4	49.5	448.2	35.8	70.3	79.1	98.9	58.8	150.5	62.0	7.6	161.0	162.5	1,988.3
1984[1]	110.4	56.7	70.4	48.3	431.2	45.6	84.1	67.0	81.0	48.4	190.8	66.2	8.4	150.0	148.8	2,060.6

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.734

United States Official Winter Wheat Crop Production Reports In Thousands of Bushels

Crop Year	Previous December	May 1	June 1	July 1	August 1	Sept. 1	Current December	Final
1976–7	1,495,869	1,458,996	1,416,000	1,530,124	1,542,660	1,542,330	1,566,074	1,564,118
1977–8	1,438,015	1,477,455	1,526,000	1,539,029	1,526,029	1,528,844	1,526,713	1,540,419
1978–9	1,321,068	1,284,375	1,308,000	1,801,705	1,248,405	1,243,685	1,248,272	1,222,446
1979–0	1,441,306	1,390,848	1,427,000	1,560,768	1,602,901	1,595,591	1,608,897	1,601,234
1980–1	1,567,817	1,711,010	1,757,170	1,848,000	1,870,000	1,878,000	1,891,251	1,895,383
1981–2	1,977,079	2,078,137	2,013,607	2,092,692	2,064,845	2,059,205	2,098,719	2,103,538
1982–3	2,128,133	2,063,336	2,131,214	2,124,854	2,095,554	2,106,149	2,108,246	2,073,560
1983–4	Discontinued	1,893,241	1,882,916	1,937,388	1,963,243	1,976,843	1,993,888	1,988,304
1984–5	"	1,979,366	1,972,776	2,021,918	2,045,088	2,036,028	2,060,646	

Source: Crop Reporting Board, U.S.D.A. T.736

Production of All Spring Wheat in the United States In Millions of Bushels

	Durum Wheat							Other Spring Wheat									
Year	Arizona	California	Minnesota	Montana	North Dakota	South Dakota	Total Durum	Colorado	Idaho	Minnesota	Montana	North Dakota	Oregon	South Dakota	Utah	Washington	Total U.S.
1976	23.9		2.7	8.6	90.5	1.6	134.9	1.6	29.2	123.5	60.2	193.6	4.2	20.5	1.3	11.3	449.7
1977	6.1		2.8	4.8	60.5	3.3	80.0	1.1	18.4	125.6	44.9	167.0	2.4	51.7	.6	6.1	425.1
1978	6.4		3.8	8.7	102.1	3.8	133.3	2.0	33.6	87.8	53.7	180.1	4.6	44.0	1.4	11.2	419.8
1979	5.3		2.8	6.8	84.5	3.6	106.7	2.6	38.4	85.8	52.3	165.1	9.3	46.0	1.6	23.4	426.2
1980	12.4	7.8	3.4	7.6	73.2	4.1	108.4	3.1	44.2	96.9	57.4	105.5	5.4	37.4	1.4	17.2	370.5
1981	18.3	14.7	5.4	11.0	130.8	5.8	185.9	4.0	34.1	134.0	72.5	197.4	4.2	52.8	1.4	7.0	509.3
1982	7.0	11.6	3.0	9.9	110.8	3.5	145.9	3.5	41.8	120.8	89.9	209.3	4.1	58.8	1.6	13.4	545.5
1983	5.0	6.3	1.2	4.1	54.3	2.1	73.0	5.1	36.1	75.1	53.7	135.0	3.6	36.4	1.4	10.1	358.5
1984[1]	7.2	9.4	1.6	3.6	78.6	3.1	103.4	4.9	24.7	103.7	34.1	183.6	2.8	61.7	1.8	11.6	431.4

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.* T.735

Wheat Under Price Support Through the End of the Month (Cumulative Total from Current Season's Crop) In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1976–7	8.3	22.0	44.0	82.2	148.1	226.1	278.7	300.7	341.5	363.1	424.7	468.3	468.3
1977–8	186.9	327.2	406.7	438.7	462.8	478.7	509.2	523.6	556.4	572.6	579.5	582.1	582.1
1978–9	53.0	105.7	154.6	183.1	202.5	213.4	237.5	242.8	251.0	254.0	254.3	255.0	255.0
1979–0	6.5	30.1	55.6	82.8	103.3	115.5	138.2	145.4	161.0	176.4	179.4	180.5	180.5
1980–1	35.7	56.6	99.2	126.5	142.2	183.3	228.6	261.0	297.4	328.0	328.0	329.4	329.4
1981–2	84.6	164.4	254.8	296.1	314.1	344.7	392.3	411.7	427.4	443.3	444.5	445.8	
1982–3	106.7	206.5	335.2	414.0	467.2	501.1	579.1	606.1	629.4	638.6	640.9	643.4	
1983–4	196.3	335.2	357.5	462.8	494.7	520.4	571.5	595.4	619.2	627.5	629.1	630.3	
1984–5	48.8	104.9	195.5	213.4	225.6	237.7	263.5	270.2					

Source: Economic Research Service, U.S.D.A. T.729

United States Grindings of Wheat by Mills In Millions of Bushels (of 60 Pounds Each)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1974–5	42.2	45.6	47.0	51.5	47.0	44.3	43.9	39.7	42.8	46.4	45.7	44.4	540.5
1975–6	47.4	49.0	51.2	54.1	45.2	46.0	50.0	47.3	51.7	49.9	49.5	50.4	575.2
1976–7	52.1	57.8	55.3	54.2	50.3	49.7	50.9	50.8	57.6	49.2	49.7	49.1	591.7
1977–8	46.1	54.8	52.2	52.4	53.2	52.1	48.4	48.9	54.8	50.5	53.6	51.5	606.9
1978–9	49.7	56.1	50.5	55.3	52.9	48.9	51.0	48.3	52.6	50.3	55.2	50.3	621.1
1979–0	52.1	59.0	52.4	58.9	55.7	50.6	55.0	50.4	49.1	47.2	49.8	47.8	628.0
1980–1	51.8	53.0	54.8	58.4	54.6	56.9	53.9	51.1	55.3	53.4	52.2	52.6	648.0
1981–2	51.2	53.3	54.6	55.6	51.0	50.2	53.7	52.8	56.7	50.3	49.0	50.2	628.6
1982–3[1]	52.3	55.8	54.3	56.3	53.8	54.8	54.8	52.7	59.1	53.9	58.1	56.7	662.6
1983–4[1]	55.2	65.0	61.9	58.4	56.2	55.0	55.7	57.5	58.4	54.0	60.1	54.6	692.0
1984–5[1]	51.8	59.2	55.2	58.7	56.3	53.1							

[1] Preliminary. *Source: Bureau of the Census*

T.744

U.S. Wheat Foreign Trade and Domestic Disappearance In Millions of Bushels

Year Begin. June	Imports (Grain Only)					Exports (Grain Only)					Domestic Disappearance				
	June-Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total	June-Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total	June-Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total
1974–5	2.1	.6	.4	.2	3.3	330	283	255	150	1,019	232	172	191	78	672
1975–6	.7	.7	.3	.6	2.4	428	344	247	154	1,173	245	156	202	119	722
1976–7	.9	.4	.3	1.1	2.7	399	220	179	152	950	226	187	214	127	754
1977–8	.8	.4	.4	.3	1.9	382	225	279	238	1,124	373	183	189	114	859
1978–9	.6	.5	.5	.3	1.9	493	309	225	168	1,194	327	195	177	138	837
1979–0	.7	.5	.5	.4	2.1	511	388	283	194	1,375	277	167	209	130	783
1980–1	.8	.6	.7	.4	2.5	518	371	400	224	1,514	292	199	175	117	783
1981–2	.7	.8	.8	.5	2.8	622	427	441	281	1,771	426	129	180	112	847
1982–3	1.2	3.0	2.7	.7	7.6	546	293	442	228	1,509	411	174	205	119	908
1983–4[1]	1.2	.9	1.1	.8	4.0	475	363	364	226	1,429	506	267	205	134	1,112
1984–5[1]	4.7	1.7				645	374				614	228			

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

T.730

Wheat Government Loan Program Data in the United States Loan Rates (Cents Per Bushel)

Crop Year Beginning June	Total Support Rate	National Avg.[1]	Target Rate	Corn Belt (Soft Red Winter)	Central & So. Plains (Hard Winter)	No. Plains (Spr. & Dur.)	Pacific North-West (White)	Placed Under Loan	Put in Reserve (June 1)	Repaid Loans (June 1)	Delivered to CCC	Total Stocks Ending May 31				
														Outstanding		
												Ending Carry-over	CCC Uncommitted	CCC Loans	Farmer-Owned Reserve	Privately Owned
								Millions of Bushels								
1974–5	205	137	205	139	139		141	36.5			0	435.0	—			435.0
1975–6	205	137	205	141	132	138	142	47.8			0	665.6	—			665.6
1976–7	229	225	229	229	214	227	232	498.8	216.1	234.7	48.0	1,113		—	7.4	1,113.2
1977–8	247	225	290	226	219	226	231	590.8	195.0	393.6	2.2	1,178		—	17.3	1,129.5
1978–9	340	235	340	234	228	236	241	255.1	23.9	231.2	—	924.1		—	14.6	873.0
1979–0	340	250	340	248	243	251	257	180.5	39.7	140.8	—	902.0		99.3	259.9	714.2
1980–1	363	300	363	300	294	302	308	329.4	205.1	123.2	—	989.1		54.6	359.6	789.4
1981–2	381	320	381	320	313	321	329	452.2	239.8	180.7	61.1	1,159		112.0	560.4	696.1
1982–3[2]	405	355	405	356	336	357	365	604.9	573.1	9.9	9.3	1,515		65.2	1,060.6	1,323.1
1983–4[3]	430	365	430	366	356	368	375	630			192.0	1,399		379.1	611.3	1,210.5
1984–5[3]	438	330	438	332	323	334	343					1,416				1,001.1

[1] The national average loan rate at the farm as a percentage of the parity-priced wheat at the beginning of the marketing year. [2] Preliminary. [3] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.*

T.741

Exports of Wheat (Only) from the United States In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1975–6	99.7	111.2	125.5	123.6	117.8	92.3	91.6	72.4	76.4	76.8	67.8	66.7	1,121.8
1976–7	85.4	113.0	109.9	98.7	53.3	56.9	49.0	57.7	50.7	68.1	66.4	75.6	884.7
1977–8	82.8	93.4	108.5	68.3	56.7	86.7	64.6	94.5	103.3	101.8	118.8	108.8	1,088.2
1978–9	106.1	131.9	118.3	113.0	92.3	90.0	70.4	67.1	75.5	77.0	76.8	102.2	1,120.6
1979–0	133.3	117.8	129.6	149.0	108.9	114.9	82.7	89.5	94.7	98.3	88.6	96.2	1,305.5
1980–1	123.6	139.6	136.0	116.2	112.2	131.9	129.9	124.4	128.8	127.7	76.0	124.5	1,470.8
1981–2	138.1	145.4	194.1	156.9	127.5	137.4	124.2	138.7	159.1	147.4	114.8	155.7	1,739.3
1982–3	117.9	124.0	130.8	98.5	94.1	88.5	143.1	146.3	131.1	111.8	95.3	112.0	1,393.0
1983–4	115.8	87.5	119.2	114.8	102.3	128.4	118.3	111.0	118.7	94.3	111.7	104.8	1,326.8
1984–5[1]	133.3	146.0	242.4	136.9	96.1	131.4							

[1] Preliminary. *Source: Department of Commerce* T.738

United States Wheat and Wheat Flour Imports and Exports In Thousands of Bushels

Year Beginning June	Imports: Wheat: Suitable for Milling	Imports: Wheat: Unfit for Human Consumption	Imports: Flour (Wheat Equivalent)	Imports: Other Pdt's.[2] (Wheat Equivalent)	Imports: Total	Exports: Public Law 480: Sales for Foreign Currency[3]	Exports: Public Law 480: Long-Term $ & Conver. for Cur. Credit Sales	Exports: Public Law 480: Gov't. to Gov't. Donations[4]	Exports: Public Law 480: Donations Thru Voluntary Relief Agencies	Exports: Barter for Strategic Materials	Exports: Mutual Security (A.I.D.)[5]	Exports: Total Specified Gov't. Programs
1975–76	631	344	92	1,307	2,374	—	105,861	2,734	7,046	—	8,348	123,989
1976–77	1,298	20	32	1,381	2,731	—	133,504	8,887	17,842	—	15,836	158,277
1977–78	424	2	20	1,475	1,921	—	119,225	6,313	11,487	—	12,520	149,545
1978–79	18	15	45	1,772	1,850	—	126,819	5,968	9,808	—	243	142,838
1979–80	155	50	62	1,869	2,136	—	107,288	8,724	7,064	—	2,147	125,218
1980–81	128	58	200	2,148	2,534	—	101,052	9,659	7,158	—	153	118,022
1981–82[1]	59	14	357	2,423	2,853	—	109,995	6,838	6,332	—	—	123,165
1982–83[1]					7,600							
1983–84[1]					4,000							

[1] Preliminary. [2] Includes macaroni, semolina & similar pdt's. [3] Authorized by title, I, P.L. 480. [4] Author, by title II, P.L. 480. [5] Foreign Assist. Act of 1961. *Source: Economic Research Service, U.S.D.A.* T.732

Wheat Stocks in the United States In Millions of Bushels

Year	On Farms: Jan. 1	On Farms: Apr. 1	On Farms: June 1[2]	On Farms: Oct. 1	Off Farms: Jan. 1	Off Farms: Apr. 1	Off Farms: June 1[2]	Off Farms: Oct. 1	Total Stocks: Jan. 1	Total Stocks: Apr. 1	Total Stocks: June 1[2]	Total Stocks: Oct. 1
1975	446.3	274.1	132.7	755.5	661.2	388.0	194.3	1,129.0	1,107.5	662.1	327.0	1,884.5
1976	547.6	342.6	235.5	833.3	838.0	594.2	429.8	1,354.9	1,385.7	936.8	665.3	2,188.2
1977	665.4	511.0	426.3	1,035.1	1,116.4	878.5	685.9	1,365.3	1,781.8	1,389.5	1,112.2	2,400.4
1978	831.3	639.9	492.9	1,029.7	1,162.5	887.8	683.8	1,104.2	1,993.8	1,527.7	1,176.7	2,133.9
1979	814.4	633.3	484.3	1,030.1	816.4	596.2	439.8	1,240.7	1,630.8	1,229.4	924.1	2,270.8
1980	773.9	569.6	376.5	975.9	942.2	655.5	525.5	1,497.6	1,716.2	1,225.1	902.0	2,473.5
1981	754.0	539.1	414.4	1,197.7	1,150.3	790.1	574.7	1,529.8	1,904.2	1,329.1	989.1	2,727.5
1982	948.7	742.6	576.2	1,402.3	1,223.4	809.0	583.2	1,567.2	2,172.1	1,551.6	1,159.4	2,969.5
1983	1,150.5	870.8	668.9	1,235.9	1,355.6	991.2	846.1	1,719.3	2,506.2	1,862.0	1,515.1	2,955.2
1984[1]	1,015.4	771.2	591.7	1,200.0	1,311.0	985.4	806.7	1,523.8	2,326.4	1,756.6	1,398.6	2,740.0
1985[1]	933.5				1,206.3				2,139.8			

[1] Preliminary. [2] Data prior to 1976 are *as of July 1*. *Source: Crop Reporting Board, U.S.D.A.* T.731

Commercial Stocks of Domestic Wheat[1] in the United States, at First of Month In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1975–6	172.5	313.9	380.2	415.8	398.0	338.1	274.7	238.8	220.1	209.0	179.6	168.7
1976–7	291.9	420.3	461.6	504.9	477.5	432.3	416.5	388.2	370.0	350.4	332.7	320.6
1977–8	383.9	469.3	526.5	509.0	488.0	460.2	418.6	385.4	355.8	321.5	281.9	240.5
1978–9	250.9	305.6	319.9	318.9	272.0	246.9	223.1	199.1	181.1	166.6	144.7	131.0
1979–0	197.0	326.8	360.0	371.4	338.2	302.9	274.5	259.0	253.4	228.1	200.3	184.2
1980–1	283.9	432.6	502.4	505.9	490.5	458.1	412.2	347.9	299.4	243.4	194.9	194.4
1981–2	312.2	427.0	472.0	487.4	476.9	425.8	395.6	352.4	285.1	254.3	218.2	204.9
1982–3	256.8	401.4	471.5	500.7	493.9	454.2	442.5	404.9	360.4	333.8	300.9	267.5
1983–4	285.0	403.1	462.1	477.0	442.0	385.4	334.9	294.9	273.0	255.1	236.6	212.4
1984–5	265.2	423.0	413.7	409.4	387.8	352.8	309.9	268.0	248.5	239.8		

[1] Domestic wheat in store in public and private elevators in 39 markets and wheat afloat in vessels or barges at lake and seaboard ports, the first Saturday of the month. *Source: Department of Agriculture* T.746

WHEAT

United States Wheat Quarterly Supply and Disappearance In Millions of Bushels

	Supply				Disappearance							Ending Stocks		
					Domestic Use									
Year & Begin. June 1	Beginning Stocks	Production	Imports[2]	Total Supply	Food	Alc. Beverages	Seed	Feed[3]	Total	Exports[2]	Total Disappearance	Gov't. Owned[4]	Privately Owned[5]	Total Stocks
1978–9	1,178	1,776	1.9	2,955	592.4	.1	87.0	157.6	837.0	1,194	2,031	50.2	873.9	924.1
June–Sept.	1,178	1,776	.6	2,954	191.7	[6]	27.0	108.0	326.7	493.3	820.0	48.9	2,085	2,134
Oct.–Dec.	2,134	—	.5	2,134	153.8	[6]	34.0	7.0	194.8	308.8	503.6	49.5	1,581	1,631
Jan.–Mar.	1,631	—	.5	1,631	147.8	[6]	1.0	28.6	177.4	224.5	401.9	49.5	1,180	1,229
Apr.–May	1,229	—	.3	1,230	99.1	.1	25.0	14.0	138.1	167.5	305.6	50.2	873.9	924.1
1979–0	924.1	2,134	2.1	3,060	596.1	—	101.0	86.0	783.1	1,375	2,158	141.7	760.3	902.0
June–Sept.	824.1	2,134	.7	3,059	198.5	[6]	33.0	45.6	277.1	511.0	788.1	49.9	2,221	2,271
Oct.–Dec.	2,271	—	.5	2,271	157.9	[6]	37.0	-27.7	167.2	387.9	555.1	49.6	1,667	1,716
Jan.–Mar.	1,716	—	.5	1,717	145.1	[6]	1.0	62.8	208.9	282.7	491.6	63.3	1,162	1,225
Apr.–May	1,225		.4	1,226	94.6	.1	30.0	5.3	129.9	193.6	323.5	141.7	760.3	902.0
1980–1	902.0	2,381	2.5	3,285	610.5	—	113.0	59.0	782.5	1,514	2,296	199.7	789.4	989.1
June–Sept.	902.0	2,381	.8	3,284	197.2	[6]	38.0	56.6	291.8	518.4	810.2	201.1	2,272	2,474
Oct.–Dec.	2,474	—	.6	2,474	167.1	[6]	43.0	-11.6	198.5	371.4	569.9	203.1	1,701	1,904
Jan.–Mar.	1,904	—	.7	1,905	150.1	[6]	1.0	24.3	175.4	400.4	575.8	202.6	1,127	1,329
Apr.–May	1,329	—	.4	1,330	96.1	[6]	31.0	-10.3	116.8	223.6	340.4	199.7	789.4	989.1
1981–2	989.1	2,785	2.8	3,777	602.4	[6]	110.0	134.8	847.2	1,771	2,618	190.3	969.1	1,159
June–Sept.	989.1	2,785	.7	3,775	202.5	[6]	37.0	186.4	425.9	621.8	1,048	191.6	2,536	2,728
Oct.–Dec.	2,728	—	.8	2,728	159.0	[6]	45.0	-75.2	128.8	427.4	556.2	190.6	1,982	2,172
Jan.–Mar.	2,172	—	.8	2,173	151.7	[6]	1.0	27.6	180.3	441.0	621.3	189.1	1,362	1,551
Apr.–May	1,552	—	.5	1,552	89.2	[6]	27.0	-4.0	112.2	280.5	392.7	190.3	969.1	1,159
1982–3	1,159	2,765	7.6	3,932	616.4	[6]	97.0	194.9	908.3	1,509	2,417	192.0	1,323	1,515
June–Sept.	1,159	2,765	1.2	3,926	206.4	[6]	37.0	167.1	410.5	545.6	956.1	190.6	2,779	2,970
Oct.–Dec.	2,970	—	3.0	2,973	161.8	[6]	40.0	-28.1	173.7	292.6	466.3	185.4	2,321	2,506
Jan.–Mar.	2,506	—	2.7	2,509	151.4	—	1.0	52.4	204.8	442.1	646.9	185.2	1,677	1,862
Apr.–May	1,862	—	.7	1,863	96.8	—	19.0	3.5	119.3	228.3	347.6	192.0	1,323	1,515
1983–4[1]	1,515	2,420	4.0	3,939	635.5		100.0	376.2	1,112	1,429	2,540	188.1	1,211	1,399
June–Sept.	1,515	2,420	1.2	3,936	210.1	—	37.7	258.8	505.9	475.3	980.9	157.5	2,798	2,955
Oct.–Dec.	2,955	—	.9	2,956	160.7	—	41.0	65.4	267.1	362.6	629.7	165.6	2,161	2,326
Jan.–Mar.	2,326	—	1.1	2,328	163.0	—	1.0	41.0	205.0	364.4	569.4	167.1	1,591	1,758
Apr.–May	1,758	—	.8	1,759	101.7	—	21.0	11.3	134.0	226.3	360.3	188.1	1,211	1,399
1984–5[7]	1,399	2,596	7.0	4,001	645.0	—	90.0	375.0	1,110	1,475	2,585	415.0	1,001	1,416
June–Sept.	1,399	2,596	4.7	3,999	212.9	—	32.0	369.2	614.1	644.7	1,259	325.2	2,415	2,740
Oct.–Dec.	2,740	—	1.7	2,742	165.0	—	37.0	25.6	227.6	374.3	601.9	371.8	1,768	2,140
Jan.–Mar.														

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[1] Preliminary. [2] Imports & exports include flour and other products expressed in wheat equivalent. [3] Residual. [4] Uncommitted, Gov't. only. [5] Includes total loans. [6] Less than 50,000 bushels. [7] Projected. *Source: Economics Research Service, U.S.D.A.* T.740

Wheat Supply and Distribution in Canada, Australia and Argentina In Millions of Metric Tons

	Canada (Yr. Beg. Aug. 1)					Australia (Yr. Beg. Dec. 1)					Argentina (Yr. Beg. Dec. 1)				
	Supply			Disappearance		Supply			Disappearance		Supply			Disappearance	
Crop Year	Stocks Aug. 1	New Crop	Total Supply	Domestic	Exports[1]	Stocks Dec. 1	New Crop	Total Supply	Domestic	Exports[1]	Stocks Dec. 1	New Crop	Total Supply	Domestic	Exports[1]
1974–5	10.1	13.3	23.4	4.6	1.07	2.0	11.4	13.4	3.1	8.6	1.0	6.0	7.0	4.5	1.8
1975–6	8.0	17.1	25.1	4.6	12.3	1.7	12.0	13.7	2.3	8.7	.7	8.6	9.3	5.4	3.2
1976–7	8.2	23.6	31.8	5.0	13.4	2.7	11.7	14.4	2.8	9.5	.7	11.0	11.7	4.2	5.9
1977–8	13.3	19.9	33.2	5.1	16.0	2.1	9.4	11.5	2.6	8.1	1.6	5.7	7.3	4.3	1.8
1978–9	12.1	21.1	33.2	5.3	13.1	.8	18.1	18.9	2.5	11.7	1.2	8.1	9.3	4.1	4.1
1979–0	14.9	17.2	32.1	5.5	15.9	4.6	16.2	20.8	3.4	13.2	1.1	8.1	9.2	4.0	4.8
1980–1	10.7	19.2	29.9	5.0	16.3	4.3	10.9	15.2	3.5	9.6	.4	7.8	8.2	3.9	3.8
1981–2	8.6	24.8	33.4	5.2	18.4	2.0	16.4	18.4	2.5	11.1	.4	8.3	8.7	4.3	3.6
1982–3	9.8	26.7	36.5	5.1	21.4	4.9	8.9	13.8	4.1	7.3	.8	14.5	15.3	4.4	9.9
1983–4[2]	10.0	26.6	36.6	5.9	21.8	2.4	21.9	24.3	2.6	14.2	1.0	12.3	13.3	4.7	7.9
1984–5[3]	9.0	21.2	30.2	5.3	16.7	7.6	18.5	26.1	3.1	15.1	.7	12.7	13.4	4.5	8.2
1985–6[3]	8.2					7.9					.7				

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[1] Including flour. [2] Preliminary. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.* T.725

Comparative Average Cash Wheat Prices In Dollars per Bushel

					Minneapolis					Export Prices ($ per Metric Ton)				
Crop Year—June to May	Received by U.S. Farmers	No. 2 Soft Red Winter Chicago	No. 1 Hard Red Ordin. Prot. Kansas City	No. 2 Soft Red Winter St. Louis	No. 1 Dark Northern Spring	No. 2 Hard Amber Durum	No. 1 Soft Portland Oregon	No. 2 Western White Pacific N.W.	No. 2 White Soft Toledo	Gulf No. 1 H.R. Winter Ports	Gulf No. 1 Soft Red Win.	Duluth No. 2 No. Spr.	Portland No. 2 White West.	Rotterdam C.I.F. U.S. Dk. No. Spr.
1975–6	3.56	3.54	3.74	3.46	3.74	5.16	3.88	3.55	3.36	4.05			4.47	187
1976–7	2.73	2.81	2.88	2.78	2.96	3.30	3.10	2.78	2.75	115	108	123	116	147
1977–8	2.33	2.56	2.72	2.54	2.66	3.37	3.09	2.72	2.48	110	101	106	116	131
1978–9	2.97	3.57	3.38	3.43	3.17	3.66	3.73	3.30	3.54	135	136	124	140	154
1979–0	3.78	4.24	4.25	4.10	4.16	5.09	4.22	3.83	4.06	171	164	159	161	200
1980–1	3.91	4.33	4.45	4.39	4.46	6.81	4.36	3.94	4.07	178	171	172	166	215
1981–2	3.65	3.74	4.27	3.66	4.17	4.61	4.20	3.82	3.70	171	144	161	158	194
1982–3[1]	3.55	3.32	3.94	3.32	3.94	4.25	4.39	3.93	3.26	158	128	152	165	178
1983–4[1]	3.53	3.56	3.83	3.62	4.21	4.83	3.95	3.58	3.48	153	140	159	148	186
1984–5[2]														

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.*

T.733

Commercial Stocks of Canadian Wheat[1] in Canada, at First of Month In Thousands of Metric Tons[2]

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1975–6	163.3	190.7	183.0	207.2	219.6	220.8	217.2	209.9	203.1	187.3	178.0	151.5
1976–7	153.6	183.5	185.6	222.8	223.9	244.2	253.0	236.7	233.7	220.5	208.5	189.8
1977–8[2]	4,905	4,985	5,477	6,263	6,358	5,948	5,645	5,108	5,159	5,194	4,987	4,711
1978–9	5,612	6,251	6,045	5,596	5,131	5,034	5,113	4,799	4,799	4,894	4,637	4,147
1979–0	4,810	5,149	5,581	5,990	5,992	5,754	6,172	6,069	5,731	5,260	4,620	4,539
1980–1	4,210	5,659	4,963	4,997	5,137	5,338	5,292	5,234	5,288	5,130	4,719	3,939
1981–2	4,311	5,697	5,742	5,924	5,082	5,829	6,131	5,526	5,953	5,718	4,820	4,294
1982–3	5,768	5,948	5,767	7,941	8,091	7,223	7,618	7,761	7,086	6,571	6,285	5,552
1983–4	6,547	7,883	7,827	7,713	6,292	7,392	7,532	7,477	7,230	6,837	7,352	6,410
1984–5	6,553	7,525	7,373	6,949	6,781	7,987	7,971	8,122	7,725			

[1] Canadian wheat in Canada exclusive of farm stocks, first Wednesday of month. [2] Data prior to July 1977 are in millions of bushels. *Source: Board of Grain Commissioners of Canada*

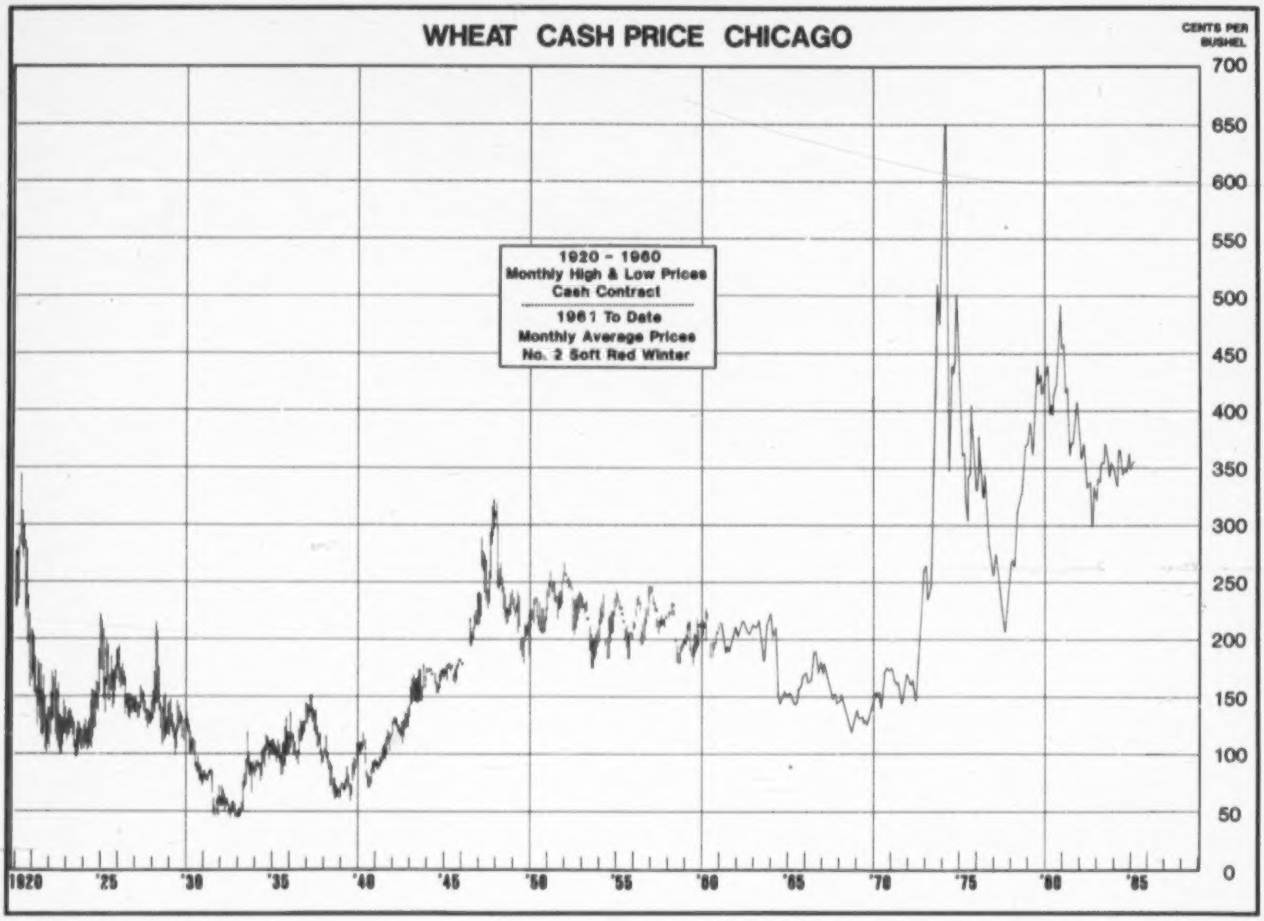
T.747

Open Interest of All Wheat Futures Contracts at Chicago,[1] K.C. & Mpls. In Millions of Bushels

	End of Month[1]												Kansas City[3]		Minn.[2]
Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. 1	July 1	Jan. 1
1976	165.8	206.7	202.9	171.2	183.5	226.4	237.2	227.2	233.8	270.2	260.5	229.4	102.5	120.6	27.4
1977	220.0	238.0	203.0	196.6	183.0	200.1	207.6	208.1	240.9	248.2	236.9	245.1	107.4	81.6	27.4
1978	229.4	200.7	180.6	164.9	193.2	163.1	190.0	240.9	255.9	241.7	240.4	186.4	102.7	84.8	25.9
1979	195.0	195.1	173.5	187.2	176.0	250.2	258.6	302.6	319.7	284.1	287.5	286.9	84.7	120.1	35.3
1980	279.5	266.6	222.5	214.2	213.5	270.0	345.4	345.7	376.3	442.9	420.1	350.5	121.0	92.0	31.5
1981	291.1	236.5	211.7	209.8	243.0	283.1	324.4	329.5	337.3	384.7	368.7	312.9	142.6	80.7	28.7
1982	335.9	274.7	244.5	234.9	253.2	235.5	277.6	254.8	238.9	218.7	186.8	182.3	137.0	97.7	28.7
1983	193.9	155.5	194.9	172.2	191.7	223.0	294.0	348.1	329.7	300.3	282.3	304.3	118.5	106.0	21.3
1984	291.5	281.3	288.9	248.4	256.7	215.3	246.6	233.0	217.9	222.5	209.9	213.3	89.0	92.8	23.7
1985	197.9	191.7	176.2										95.4		21.6

[1] Chicago Board of Trade. [2] Minneapolis Grain Exchange. [3] Kansas City Board of Trade. *Source: Commodity Futures Trading Commission*

T.718



Average Price of No. 2 Soft Red Winter (30 Days) Wheat at Chicago In Dollars per Bushel

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
1975–6	3.03	3.42	3.82	4.06	3.84	3.49	3.32	3.45	3.78	3.66	3.34	3.30	3.54
1976–7	3.47	3.37	3.01	2.89	2.72	2.60	2.66	2.73	2.74	2.63	2.53	2.35	2.81
1977–8	2.29	2.20	2.08	2.20	2.27	2.59	2.65	2.69	2.64	2.82	3.11	3.14	2.56
1978–9	3.18	3.22	3.32	3.42	3.51	3.68	3.68	3.73	3.88	3.79	3.60	3.86	3.57
1979–0	4.36	4.39	4.23	4.28	4.30	4.13	4.26	4.36	4.39	4.18	3.96	4.04	4.24
1980–1	3.96	4.17	4.21	4.38	4.70	4.92	4.54	4.57	4.34	4.15	4.18	3.80	4.33
1981–2	3.60	3.70	3.70	3.87	3.97	4.08	3.86	3.77	3.57	3.59	3.70	3.43	3.74
1982–3	3.31	3.36	3.35	3.18	2.98	3.33	3.23	3.32	3.40	3.36	3.51	3.55	3.32
1983–4	3.53	3.59	3.71	3.62	3.56	3.42	3.55	3.47	3.34	3.57	3.65	3.65	3.56
1984–5	3.51	3.44	3.49	3.47	3.51	3.62	3.49	3.51	3.55				

Source: Agricultural Marketing Service, Grain Division, U.S.D.A. T.745

Stocks of Wheat Flour Held by Mills in the United States In Thousands of Sacks (100 Pounds)

Year	Jan. 1	April 1	July 1	Oct. 1	Year	Jan. 1	April 1	July 1	Oct. 1
1976	3,907	4,510	3,923	3,621	1981	3,842	3,897	3,895	4,222
1977	1,334	4,248	4,167	3,537	1982	3,460	3,384	3,744	3,563
1978	4,160	4,096	3,459	3,342	1983[1]	4,276	3,760	3,490	3,599
1979	3,214	3,477	3,895	3,813	1984[1]	3,805	3,780	3,763	3,833
1980	3,975	3,323	4,268	3,716	1985[1]	4,230			

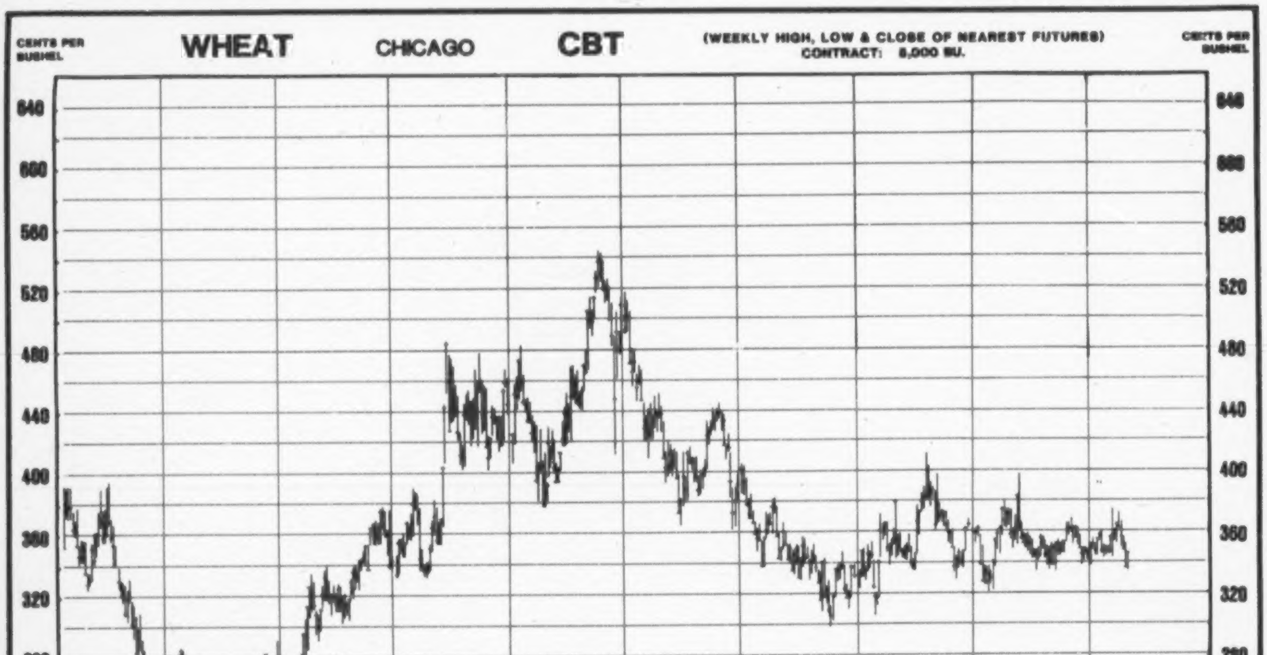
[1] Preliminary. *Source: Department of Commerce* T.755

High, Low & Closing Prices of May Wheat Futures on the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery									Delivery Year					Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	
1980	High	371	398	514	486	475	481	500	469½	474¾	474	491	458½	429	428½	514
	Low	344½	366½	390	406½	411	430½	436	433	443	415¾	447	383	376½	383	344½
	Close	368½	390¾	451	415	464½	474¼	450¾	462¼	462¼	473½	447¼	383½	385½	414	—
1981	High	477	490	482½	503½	506	541½	570½	563½	553½	526	487	451	451	439½	570½
	Low	440½	451	444	462½	482½	502	517	541¼	455½	465	455	418½	426	393	393
	Close	450	453½	470	500¾	502¼	531	554¼	553¼	510¼	471¼	457½	433¾	433¾	398	—
1982	High	526	510	489	491	484½	465	476½	478½	453½	412	400½	375½	382½	360	526
	Low	500	479	447	455	446½	447	455	444½	384	382	360½	345	357	342	342
	Close	506	487	454	476	449½	458	474¼	447¾	400¾	391¾	366¾	370¼	357	354	—
1983	High	444¼	434½	411	403½	399	390½	354¼	368¼	355	356¾	363½	370½	366¼	360½	444¼
	Low	423	406¼	388½	381	374	343¼	327¼	338½	333¼	330½	318½	322¼	338¼	341¾	318½
	Close	431	406¼	395	392	383¼	349½	337¾	353¾	338½	351½	321½	360¼	351¼	346¾	—
1984	High	415	403	388	401¼	441	432	392½	376	365½	359	333¾	375	380	397	441
	Low	396	380¼	375¾	372½	397	386	364¾	347½	347	329¾	324½	330	349½	348½	324½
	Close	399	380¼	379½	398	431¼	390½	369½	355	360½	334	331¼	374	350¾	396½	—
1985	High	383½	405	392½	387	388	363	363½	362½	349¼	347¾	350	361¼			
	Low	372	367¼	373½	369	355¼	350	351¼	347¼	334½	332½	333¾	335½			
	Close	372	390½	385½	381½	357	353¾	361	349	341	343½	336¼	356½			

Source: Chicago Board of Trade

T.750



Average Price of No. 1 Hard Winter (Ordinary Protein) Wheat, at Kansas City In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1977–8	235	231	247	256	281	280	282	284	307	321	312	312	272
1978–9	314	314	324	342	348	339	342	350	352	353	364	417	338
1979–0	434	412	426	439	453	451	433	432	407	390	410	407	425
1980–1	421	431	445	470	489	454	460	447	435	448	436	424	445
1981–2	425	414	419	431	446	435	433	426	425	428	422	406	427
1982–3	374	370	375	361	386	398	400	408	418	421	405	392	392
1983–4	371	388	390	384	382	385	381	371	385	393	372	380	383
1984–5	367	380	389	386	385	376	376	374					

Source: Agricultural Marketing Service, U.S.D.A. T.739

Average Price of No. 1 Dark Northern Spring Wheat at Minneapolis (14% Protein) In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1977–8	254	248	275	287	296	292	294	290	303	323	327	321	288
1978–9	311	313	326	341	347	332	330	336	342	345	373	432	335
1979–0	442	419	429	445	429	417	407	408	402	396	431	433	421
1980–1	469	455	456	482	495	477	481	478	467	480	477	456	471
1981–2	450	425	423	429	438	422	428	421	416	425	420	413	429
1982–3	416	396	402	400	408	396	393	392	408	440	440	439	409
1983–4	438	434	433	433	425	421	417	408	424	437	445	445	430
1984–5	434	407	397	403	402	392	390	392					

Source: Agricultural Marketing Service, U.S.D.A. T.742

Average Price[1] Received by Farmers for Wheat in the U.S. In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[2]
1977–8	204	213	216	230	246	247	253	259	267	282	282	281	233
1978–9	281	288	292	299	304	301	299	299	297	301	320	372	298
1979–0	389	374	387	398	394	381	374	378	364	358	369	369	382
1980–1	381	394	399	419	432	422	421	417	409	407	395	370	391
1981–2	362	362	365	377	385	380	378	370	367	368	364	339	365
1982–3	326	334	338	343	348	351	357	357	366	375	373	350	355
1983–4	334	361	365	361	354	348	350	340	349	363	366	346	353
1984–5	328	343	343	343	346	338	338	338	333				

[1] Weighted average by sales. [2] Includes an allowance for unredeemed loans at average loan values. *Source: Statistical Reporting Service, U.S.D.A.* T.743

Average Wholesale Price Index of Wheat Flour (Spring[1]) June 1983 = 100[2]

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1977–8	6.588	6.688	7.025	7.188	7.338	7.200	7.588	7.325	7.650	8.638	8.388	8.100	7.746
1978–9	8.250	7.938	7.825	7.900	8.400	8.138	7.813	8.038	8.313	8.300	9.013	9.288	8.268
1979–0	10.638	10.513	10.463	10.563	10.713	10.438	10.088	10.413	10.113	9.688	10.375	10.338	10.362
1980–1	11.025	10.963	10.975	11.113	11.138	—	11.050	11.113	10.975	11.100	11.075	11.125	11.059
1981–2	10.813	10.750	10.588	10.525	10.675	10.338	10.763	10.950	10.738	10.538	10.550	10.500	10.644
1982–3	10.538	10.188	10.475	10.388	10.463	10.450	10.163	10.300	10.753	10.813	10.950	11.213	10.558
1983–4[2]	99.9	99.6	100.0	98.4	96.6	96.1	96.4	95.8	97.0	99.3	98.8	100.6	98.2
1984–5	99.5	96.9	96.9	97.3	97.6	96.7	98.1						

[1] Standard patent. [2] Data prior to July 1983 are in $ per cwt. (bulk) at mpls. *Source: Bureau of Labor Statistics* (0212–0301.99) T.758

World Wheat Flour Production In Thousands of Metric Tons

Year	Argentina	Australia[2]	Canada	Spain	India[3]	Mexico	Israel	Japan	W. Germany	Egypt	Poland	South Africa	UN Kingdom	United States	Yugoslavia
1978	2,592	1,092	1,951	2,504	2,227	1,752	492	4,044	3,336	3,480	2,324	940	3,852	12,612	2,388
1979	2,556	1,080	1,978	2,600	1,636	1,920	480	4,176	3,456	3,492	2,440	901	3,780	12,876	2,400
1980	2,494	1,084	1,930	2,429	2,568	2,158	455	4,152	3,652	3,188	2,522	890	3,696	12,822	2,404
1981	2,545	1,134	1,900	N.A.	2,328	2,286	463	4,201	3,612	3,512	2,620	718	3,588	11,824	2,330
1982	2,644	1,127	1,750	N.A.	2,642	2,356	498	4,303	3,504	3,550	N.A.	726	3,588	12,925	2,408
1983[1]	2,780	1,088	1,702	N.A.	3,092	2,200	506	4,376	3,316	3,674	N.A.	694	3,326	13,890	2,414
1984[4]	2,500	1,200			3,350	2,500	520	4,500	3,400	3,800		685	3,600	14,000	2,100

[1] Preliminary. [2] Twelve months ending June 30 of the year stated. [3] Represents 60 percent of the total production. [4] Estimate. *Source: United Nations* T.752

Wheat and Flour—Price Relationships at Milling Centers (In Dollars)

Crop Year (June-May)	At Kansas City					At Minneapolis				
		Wholesale Price of					Wholesale Price of			
	Cost of Wheat to Produce 100 lb. Flour[1]	Bakery Flour Per 100 lb.[2]	By-Products Obtained 100 lb. Flour[3]	Total Products Actual	Total Products Over Cost of Wheat	Cost of Wheat to Produce 100 lb. Flour[1]	Bakery Flour Per 100 lb.[2]	By-Products Obtained 100 lb. Flour[3]	Total Products Actual	Total Products Over Cost of Wheat
1976–7	7.06	7.02	1.66	8.68	1.62	7.46	8.12	1.70	9.82	2.36
1977–8	6.56	6.76	1.26	8.02	1.46	6.73	7.49	1.20	8.69	1.96
1978–9	7.85	7.89	1.47	9.36	1.51	7.76	8.22	1.34	9.56	1.80
1979–0	9.85	10.02	1.70	11.72	1.87	9.73	10.26	1.51	11.77	2.04
1980–1	10.30	10.38	1.99	12.37	2.07	10.95	11.00	1.78	12.78	1.83
1981–2	9.81	10.37	1.57	11.94	2.13	9.80	10.67	1.41	12.08	2.28
1982–3	9.46	10.22	1.52	11.74	2.28	9.45	10.54	1.26	11.80	2.35
1983–4[4]	9.45	9.99	1.83	11.69	2.37	9.84	10.75	1.59	12.33	2.49
June–Sept. '84	9.21	9.77	1.48	11.25	1.51	9.64	10.31	1.21	11.52	1.89
Oct.–Dec. '84										
Jan.–Mar. '85										

[1] Cost of 2.28 bushels. [2] Quoted as 95% patent at K.C. & standard patent at Minn., bulk basis. [3] Assumes 50–50 millfeed distribution between bran & shorts or middlings, bulk basis. [4] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.751

United States Wheat Flour Production In Millions of Sacks (100 Pounds Each)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1976–7	23.1	25.7	24.6	24.1	22.3	22.1	22.6	22.7	25.8	21.9	22.1	21.8	278.8
1977–8	20.6	24.4	23.4	23.4	23.8	23.4	21.8	21.8	24.3	22.6	24.1	23.1	276.7
1978–9	22.3	25.1	22.5	24.8	23.7	21.9	22.8	21.5	23.5	22.3	24.6	22.5	277.5
1979–0	23.5	26.3	23.3	26.1	24.8	22.7	24.6	22.6	22.2	21.2	22.8	21.4	281.5
1980–1	23.1	24.0	24.8	26.3	24.4	25.2	24.2	22.8	25.0	24.0	23.4	23.5	290.7
1981–2	23.3	23.7	24.2	24.7	22.8	22.3	24.0	23.6	25.3	22.5	21.9	22.5	280.8
1982–3[1]	23.2	24.7	24.2	25.0	23.9	24.5	24.4	23.4	26.8	24.1	25.8	25.1	295.1
1983–4[1]	24.7	28.9	27.4	26.1	24.9	24.5	24.8	25.5	25.9	24.1	26.6	24.3	307.7
1984–5[1]	22.8	26.0	24.4	26.3	25.1	23.6							

[1] Preliminary. *Source: Bureau of the Census* T.754

United States Wheat Flour Exports In Thousands of 100 Pound Sacks

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1976–7	1,294	2,083	2,449	997	447	188	1,218	2,334	2,519	3,272	1,857	1,248	12,483
1977–8	1,194	1,146	730	473	766	1,237	723	1,539	1,774	2,554	2,297	2,694	17,127
1978–9	1,674	2,145	1,963	1,505	357	486	382	1,165	1,163	752	2,689	1,727	16,008
1979–0	1,669	2,489	2,218	1,223	842	1,971	1,018	1,300	2,713	867	918	1,606	18,833
1980–1	894	2,137	1,396	1,034	522	609	980	1,896	2,241	2,932	1,724	2,350	18,715
1981–2	987	1,420	724	284	117	184	605	2,165	2,336	2,858	1,760	944	14,384
1982–3[1]	352	1,196	698	593	824	185	1,587	3,734	2,692	4,256	3,193	4,172	23,482
1983–4[1]	3,293	3,095	3,621	3,469	1,122	395	830	883	2,842	2,802	3,213	2,457	28,022
1984–5[1]	1,716	285	475	1,131	164	223							

[1] Preliminary. *Source: Department of Commerce* T.756

Supply and Distribution of Wheat Flour in the United States In Thousands of Cwt.

Year	Wheat Ground 1,000 Bu.	Milfeed Production 1,000 Tons	Flour Production[1]	Flour & Product Imports[2]	Total Supply	Exports Flour	Exports Products[2]	Domestic Disappearance	Total Population July 1 Millions	Per Capita Disappearance Pounds
			1,000 Cwt.							
1976	618,284	4,920	275,077	604	275,681	16,064	44	259,573	218.0	119
1977	618,125	4,787	275,784	604	276,388	22,053	37	254,298	220.2	115
1978	621,321	4,860	277,950	773	278,723	22,170	43	256,510	222.6	115
1979	636,375	4,945	284,051	823	284,874	20,927	86	263,861	225.1	117
1980	628,599	4,866	282,655	904	283,559	17,378	54	266,127	227.7	117
1981	634,381	5,045	283,946	1,166	285,132	18,655	84	266,398	229.8	116
1982	640,158	5,137	284,965	1,496	286,461	20,926	154	265,381	232.1	114
1093[3]	686,983	5,563	306,066	1,109	307,175	34,969	150	272,056	234.3	116

[1] Commercial production of wheat flour, whole wheat, industrial and durum flour and farina reported by Bureau of Census. [2] Imports and exports of macaroni products (flour equivalent). [3] Preliminary. *Source: Economics & Statistics Service, U.S.D.A.* T.753

Wool

World wool production in the 1983/84 season was estimated at 3.62 billion pounds, clean, 0.7 percent over the previous season. This large output was generally not expected. Bad weather and the small margin between selling prices and production costs had been expected to hold production down.

The second highest supply of wool at the beginning of 1984/85 was a result of a record carryin for 1983/84 of 450 million pounds, clean. Sluggish demand for raw wool during the year caused stocks to rise, and world demand outside the centrally planned countries fell by 1 percent. At the end of 1983/84, the carryover was estimated at about 441 million pounds.

World production of wool in the 1984/85 season was forecast to be 3.69 billion pounds, 2 percent above the previous season. Thus, world wool availability was tentatively placed at about 4.13 billion pounds, clean, an all-time high supply of raw wool.

Beginning the present season in September 1984, the Australian Wool Corporation (AWC) purchased an average of one-third of offerings, causing their stocks to rise about 8 percent. Most of the demand was reportedly for finer grades. When demand increased later in the year, the AWC purchased only 22 percent, increasing the stockpile by 8 percent. Major support for this rise came from Chinese and Soviet buyers.

According to figures from the U.S. government, total wool consumption in the U.S. during 1984 came to 131.4 million clean pounds, vs. 130.1 million in the previous year. Total U.S. production of wool tops in 1984 amounted to 57.4 million pounds compared with 61.1 million in 1983. Carpet class wools used in the U.S. in 1984 totaled 8.9 million pounds compared with 10.9 million the year before.

Raw wool mill consumption in the U.S. during the third quarter of 1984 was estimated at 31.8 million pounds, clean, 20 percent below the previous quarter and 6 percent under the year-earlier level. Apparel wool use was 29.7 million pounds, 3 percent above a year earlier.

Mill consumption of raw wool in the U.S. during 1984 was estimated at 145 million pounds, clean, 5 percent over 1983. A moderate mill consumption of 34.3 million pounds was forecast for the fourth quarter of 1984. This reflected expected lower activity in the textile industry. Third-quarter worsted wool production is usually timed for spring retail sales, which promote light-weight clothing containing little, if any wool fibers. Worsted system mills producing fine suiting and military fabric tend to experience less seasonality.

U.S. raw wool imports in the third quarter of 1984, at 22.0 million pounds, clean, were the smallest of the previous four quarters but the largest for any third quarter in over a decade. Duty-free imports were 10 million pounds, and dutiable were 12 million. Only 7.5 million pounds of wool finer than 58's were imported in the third quarter. It was the smallest quantity of imported fine wool since fourth-quarter 1982 and was expected to reflect lower fourth-quarter 1984 mill consumption.

Third-quarter 1984 U.S. raw wool exports totaled 165,800 pounds, 48 percent under a year earlier. These shipments went to four countries: the United Kingdom, 41 percent; Canada, 22 percent; France, 18 percent, and Italy, 18 percent. The raw wool content of exported textile products was 4.0 million pounds, down 69 percent from a year earlier.

Third-quarter duty-free imports of wool into the U.S. came principally from three countries: New Zealand, 85 percent; the United Kingdom, 5 percent, and Australia, 4 percent. Four countries were the major sources for U.S. dutiable imports: Australia, 54 percent; New Zealand, 21 percent; South Africa, 6 percent; and the United Kingdom, 5 percent.

Futures Market

Greasy merino wool futures are traded on the Sidney Futures Exchange, and New Zealand crossbred wool futures are traded in London.

World Production of Wool[3] In Thousands of Metric Tons (Greasy Basis)

Year	Brazil	Argentina	Australia	China	France	Morocco	India	N. Zealand	Spain	Turkey	South Africa	Un. Kingdom	United States	Uruguay	USSR	World[1] Total
1971	34.4	188.8	880.4	88.6	21.0	13.5	37.0	322.3	32.1	47.5	121.2	44.5	81.9	62.0	428.8	2,606
1972	37.1	177.0	735.2	90.3	21.2	20.0	30.8	308.8	31.7	50.3	114.7	46.7	79.6	61.0	420.0	2,413
1973	36.5	179.2	700.9		21.4	23.0	30.1	284.8	31.8	47.3	113.3	49.4	72.0	53.0	433.0	2,355
1974	34.4	183.4	793.5		21.7	19.0	30.5	294.1	34.0	52.4	114.6	49.9	64.7	55.0	461.0	2,495
1975	31.3	190.2	757.4		21.9	20.0	31.0	311.8	29.0	53.0	114.3	50.3	58.6	60.0	463.0	2,481
1976	30.3	176.3	702.7	61.0	22.0	21.0	32.0	302.5	28.6	53.9	110.5	49.9	53.8	60.4	432.0	2,457
1977	26.9	172.0	677.4	61.0	22.4	20.0	33.1	310.8	28.0	54.1	113.4	48.0	49.9	62.2	455.0	2,465
1978	28.0	170.8	709.2	61.0	22.6	12.0	34.2	310.8	29.0	56.7	113.4	49.2	46.2	65.8	460.0	2,433
1979	31	166	709	153	26	21	35	357	29	59	110	48	48	72	412	2,553
1980[2]	35	163	700	176	27	22	35	381	28	61	112	50	49	79	464	2,641
1981[2]	33	163	716	180	27	22	35	363	21	62	112	42	50	79	482	2,653
1982[1]			701					370							471	
1983[1]			672					370							474	
1984																

[1] Estimated. [2] Preliminary. [3] Includes shorn, pulled, & wool exported on skins. *Source: Foreign Agricultural Service, U.S.D.A.* T.760

World Consumption of Wool In Millions of Pounds (Clean Basis)

Year	Argentina	Australia	Belgium	Canada	France	W. Germany	Italy	Japan	Netherlands	New Zealand	South Africa	United Kingdom	United States[3]	Uruguay	Soviet Bloc	World Total
1976[1]	71	61	70		276	145	262	346	14			264	122		1,070	3,293
1977[2]	81	57	68		259	134	251	291				250	108		1,116	3,176
1978[2]													115			
1979[2]													117			
1980[2]													123			
1981[2]													139			
1982[2]													117			
1983[2]													139			
1984[2]													146			

[1] Preliminary. [2] Estimate. [3] Consumption on woolen & worsted systems only. *Sources: Bureau of the Census; Commonwealth Economic Committee* T.761

Wool: Mill Consumption, by Grades in the U.S. Scoured Basis In Millions of Pounds

	Apparel Wool[1]							
	Woolen System			Worsted System				
Year	60's & Finer	50's Up to 60's	Total	60's & Finer	Coarser Than 60's	Total	All Total	Carpet Wool[2]
1976	20.6	29.2	49.8	34.9	21.9	56.8	106.6	15.1
1977	22.3	26.3	48.6	27.6	19.3	46.9	95.5	12.5
1978	24.4	28.6	53.0	32.7	16.5	49.2	102.3	13.0
1979	29.0	28.3	57.4	27.2	21.9	49.2	106.5	10.5
1980	28.2	28.8	57.0	35.5	20.9	56.4	113.4	10.0
1981	35.2	29.3	64.5	41.2	22.0	63.3	127.8	10.9
1982[3]	24.2	23.9	48.1	35.6	21.3	56.9	105.9	9.8
1983[3]							126.7	11.4
1984[3]							130.4	9.9

[1] Domestic & Duty-Paid Foreign. [2] Duty-Free Foreign. [3] Preliminary. *Source: Economic Research Service, U.S.D.A.* T.762

United States Imports[1] of Unmanufactured Wool (Clean Yield) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	5.8	5.3	5.6	5.9	4.7	3.9	4.8	5.7	4.6	4.0	3.3	4.4	58.0
1977	5.2	5.0	4.7	5.1	7.4	7.4	4.0	4.7	2.4	2.2	1.8	3.0	53.0
1978	3.7	3.2	4.1	4.9	4.0	3.8	4.7	5.4	3.4	4.0	4.8	4.0	50.4
1979	4.5	3.4	4.2	3.9	4.3	3.1	4.1	3.3	2.6	2.0	3.5	3.5	42.3
1980	6.1	4.9	5.1	4.6	5.7	4.5	5.3	4.8	4.1	3.9	3.6	4.0	56.5
1981	6.9	7.7	6.6	7.5	8.6	4.9	6.5	5.3	3.7	6.0	5.1	5.3	75.3
1982	8.0	6.3	6.6	4.9	6.0	6.6	4.0	4.2	4.7	2.9	3.6	3.7	61.4
1983	6.0	6.2	5.0	6.7	4.9	7.5	6.5	5.8	5.1	8.5	8.0	8.9	78.1
1984	11.2	9.0	7.8	7.8	10.4	6.7	9.6	6.4	6.0	6.9	5.6	6.8	94.2

[1] Data are imports for consumption. *Source: Department of Commerce* T.764

Price Received by Farmers for Shorn[2] Wool in the U.S. In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1976	50.7	58.4	59.5	64.4	65.1	68.1	68.3	67.0	68.2	70.8	71.2	69.5	65.7
1977	72.9	72.5	72.4	72.5	71.9	73.7	72.3	70.4	66.4	71.3	70.6	69.3	72.0
1978	72.6	68.9	71.2	73.7	73.9	76.2	74.8	74.6	72.7	77.1	81.2	73.6	74.5
1979	78.7	77.3	79.5	86.9	88.0	89.4	87.7	81.8	84.9	87.5	89.0	86.5	86.3
1980	82.1	86.8	93.5	92.2	86.6	86.5	85.8	85.5	84.7	89.4	92.1	90.9	88.1
1981	84.6	88.3	91.8	101.0	99.8	101.0	94.4	84.8	84.3	87.3	91.1	84.2	94.5
1982	73.1	72.9	63.6	83.6	76.5	68.0	77.0	64.2	56.5	70.7	54.7	55.5	68.4
1983	50.0	57.1	56.0	65.7	65.0	63.5	62.7	59.6	57.2	66.4	70.1	64.1	61.3
1984[3]	63.7	63.7	79.3	86.1	87.8	87.7	86.4	83.5	76.1	81.3	81.7	72.0	79.1
1985[3]	68.2	65.3	72.2										

[1] Weighted average. [2] Grease basis. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.* T.765

WOOL

Wool Goods[1] Production in the United States In Millions of Square Yards

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year	Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
1975	17.3	19.4	20.4	21.7	78.9	1980	45.2	46.8	31.9	34.4	158.3
1976	26.0	26.4	22.9	21.9	97.3	1981	46.6	48.9	36.4	33.1	178.1
1977	26.2	26.7	23.3	25.4	101.6	1982	38.1	36.1	18.8	23.6	121.1
1978	28.2	31.2	27.3	30.0	116.6	1983[2]	34.2	41.8	28.8	37.0	143.5
1979	33.5	31.3	26.5	28.2	117.4	1984[2]	47.8	44.4	29.5		

[1] Woolen and worsted woven goods, except woven felts. [2] Preliminary. *Source: Bureau of Census* T.763

Salient Statistics of Wool in the United States

						Pulled Wool — Production —			— Apparel Wool (Clean Content) —					—Mill Consumption—	
Year	Sheep & Lambs Shorn[2] Ths.	Weight per Fleece Lbs.	Shorn Wool Production Ths. Lbs.	Price per Lb.	Value of Production Mil. $	Avg. Weight per Skin Lbs.	Total	Total Wool Production[4]	Domestic Prod.	Exports Domestic Wool	Imports for Consumption[4]	Total New Supply[3]	Carpet Wool Imports for Cons.	Apparel	Carpet
							Thousand Pounds								
1973	17,425	8.25	143,738	82.7	118.8	3.49	8,000	151,738	81,726	3,726	19,587	97,601	40,694	109,872	41,394
1974	15,956	8.23	131,382	59.2	77.8	3.31	5,700	137,082	73,525	4,271	11,800	81,053	15,147	74,856	18,595
1975	14,403	8.30	119,535	44.7	53.5	3.33	5,300	124,835	67,488	7,674	16,605	76,419	17,021	94,117	15,908
1976	13,669	8.11	110,817	65.7	73.1	3.32	4,000	114,817	62,197	1,130	38,387	99,454	19,076	106,629	15,117
1977	13,270	8.11	107,159	72.0	77.1	3.28	1,700	108,859	58,455	385	36,303	94,373	22,655	95,485	12,526
1978	12,609	8.08	101,874	74.5	75.9	3.16	1,000	102,874	55,082	425	27,000	81,657	23,404	102,246	13,009
1979	13,068	8.02	104,860	86.3	90.5	3.20	900	105,760	56,022	313	20,283	75,992	22,047	106,533	10,513
1980	13,255	7.95	105,367	88.1	92.8	3.08	1,050	106,417	56,398	304	30,491	86,585	25,992	113,423	10,020
1981	13,477	8.14	109,689	94.4	103.6	3.03	1,150	110,839	58,788	307	48,106	106,587	26,145	127,752	10,896
1982[1]	13,152	8.03	105,596	68.5	72.3			104,966	56,500	1,351	39,988	94,059	21,433	105,857	9,825
1983[1]	12,640	7.93	100,265	61.3	61.5				53,700	1,000	49,372	101,372	28,688	126,729	11,400
1984[1]									49,700	700			30,800	130,400	9,900

[1] Preliminary. [2] Includes sheep shorn at commercial feeding yards. [3] Production minus exports plus imports; stocks not taken into consideration. [4] Apparel wool includes all dutiable wool; carpet wool includes all duty-free wool. *Sources: Economics Service, U.S.D.A.; Dept. of Commerce* T.766

Consumption of Apparel Wool in the United States In Millions of Pounds (Clean Basis)

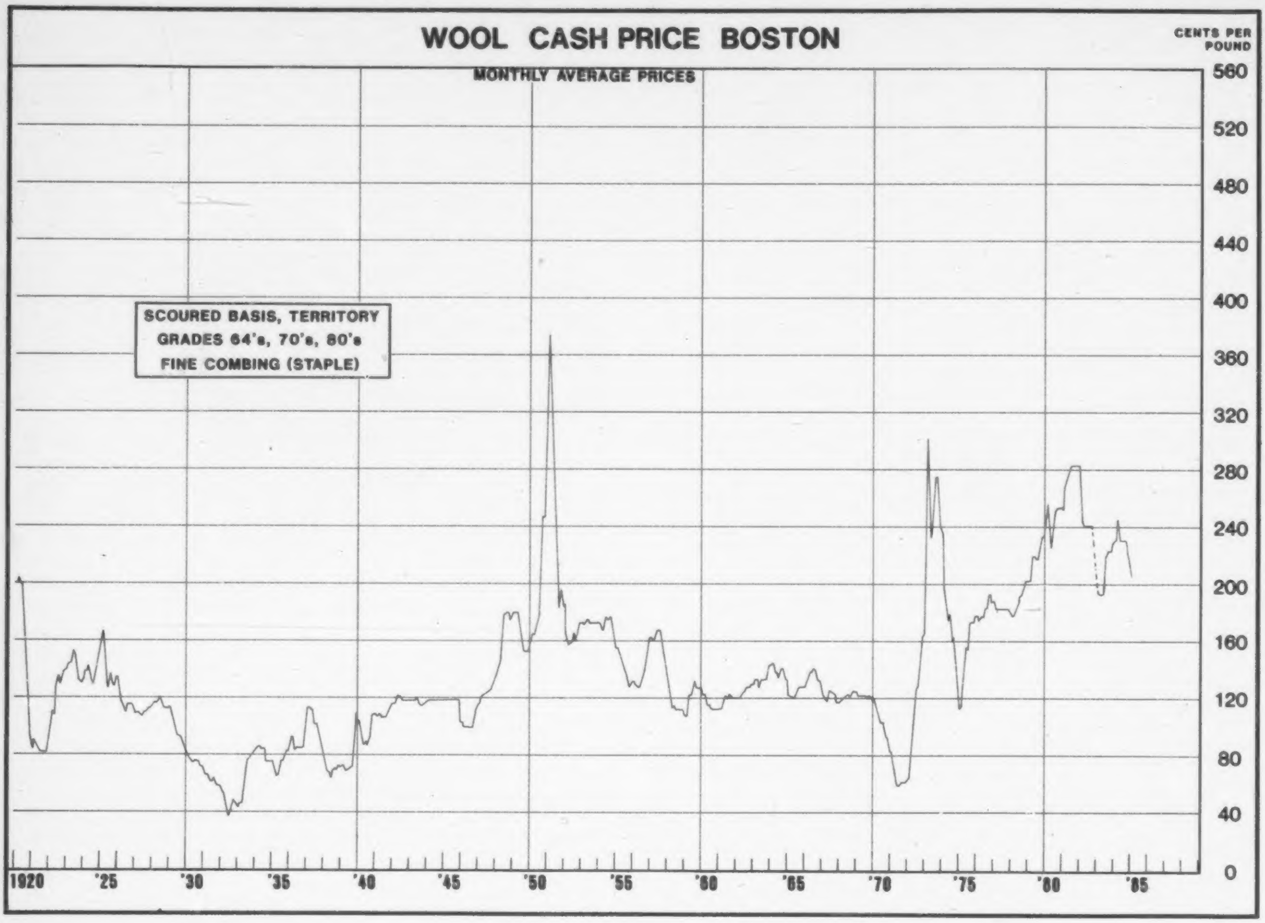
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	12.6	9.9	9.6	10.9	9.8	9.4	8.5	8.4	7.7	10.0	6.8	6.2	109.9
1974	7.8	6.3	6.4	7.2	6.6	6.5	5.5	6.1	5.6	6.9	5.5	4.6	74.9
1975	6.5	5.8	6.5	8.4	7.8	7.6	8.1	8.1	8.1	10.3	7.8	9.3	94.1
1976	8.9	8.7	12.0	9.1	8.8	11.1	7.3	7.6	9.3	7.9	6.9	9.0	106.7
1977	8.2	8.3	10.0	7.9	7.7	9.5	5.2	7.4	8.6	7.7	7.0	7.9	95.5
1978	7.7	8.2	10.5	8.8	9.2	10.3	7.0	8.4	9.4	8.1	8.1	7.5	102.2
1979	10.5	8.6	9.2	10.4	8.8	8.1	7.8	7.8	7.1	10.1	9.9	8.2	106.5
1980	11.3	10.2	9.8	11.4	9.2	8.3	7.5	8.4	7.7	10.8	8.8	10.0	113.4
1981	10.2	11.0	12.9	10.8	10.2	12.8	8.4	10.1	11.4	9.4	9.4	11.2	127.8
1982	9.4	9.6	12.8	9.1	8.2	9.4	5.9	8.0	8.3	7.1	7.7	9.4	105.9
1983[1]	8.8	9.6	12.8	10.6	9.9	13.0	8.5	10.0	12.3	10.7	10.7	11.8	126.7
1984[1]	10.6	12.1	14.0	11.4	12.1	13.1	8.3	10.0	11.4	8.7	9.1	9.6	130.4
1985													

[1] Preliminary. *Source: Bureau of the Census* T.767

Average Wool Prices[1]—Australian—64's, Type 62, Duty Paid—U.S. Mills In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	199.0	204.0	209.0	211.2	219.6	209.0	206.8	204.3	198.5	197.3	206.0	205.0	205.8
1976	205.5	206.0	—	—	212.4	213.5	213.5	216.5	224.2	232.5	224.0	227.3	217.5
1977	229.0	227.3	227.6	228.3	228.0	226.3	227.0	224.0	227.0	227.0	230.5	226.5	227.4
1978	228	230	231	232	233	236	236	236	236	236	236	236	234
1979	237	249	265	273	278	282	283	283	293	309	290	280	277
1980	292	310	306	299	310	321	311	306	311	306	320	321	309
1981	319	312	307	314	316	319	323	320	316	316	317	312	316
1982	301	303	313	323	336	321	304	294	287	276	269	267	299
1983	273	271	266	266	262	262	260	262	263	271	270	266	266
1984	268	276	279	276	271	269	255	259	247	249	255	251	263
1985	246												

[1] Raw, clean basis. *Source: U.S. Dept. of Agriculture* T.768



Average Wool Prices—Domestic[1]—Graded Territory, 64's, Staple 2¾" & Up—U.S. Mills ¢/Lb.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	82.5	82.5	75.7	70.8	63.0	59.7	59.0	59.5	61.0	61.0	60.5	61.5	66.4
1972	62.5	64.0	70.8	94.4	113.0	120.0	127.0	127.5	135.0	145.5	163.5	165.0	115.7
1973	188.0	232.5	302.5	233.8	233.5	257.5	260.0	275.0	275.0	263.0	241.9	237.5	250.0
1974	236.0	222.5	197.5	185.0	174.0	178.8	166.5	161.2	162.5	156.5	141.2	130.8	176.0
1975	116.2	112.5	113.8	134.0	150.6	155.6	153.8	171.2	172.5	172.5	172.5	177.5	150.2
1976	177.5	177.5	173.5	176.2	177.5	177.5	182.5	182.5	187.5	192.5	192.5	187.5	182.1
1977	187.5	187.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.0	183.3
1978	182	178	178	181	184	192	192	192	195	197	202	202	190
1979	202	202	206	220	220	218	218	218	220	230	233	233	218
1980	238	253	256	231	225	233	245	251	253	253	253	253	245
1981	253	268	274	278	278	283	283	283	283	283	283	283	278
1982	275	263	244	240	240	240	240	240	240	—	—	—	247
1983	—	—	193	193	193	198	219	223	225	225	225	228	212
1984	230	230	230	245	234	230	230	230	230	221	218	214	229
1985	205												

[1] Raw, shorn, clean basis. *Source: U.S. Dept. of Agriculture*

T.769

Zinc

World mine production of zinc in 1984 was close to 2 percent larger than in 1983, according to a preliminary estimate of the U.S. Bureau of Mines. However, U.S. mine production of recoverable zinc was about 7 percent lower than in 1983 and the lowest since 1921, based on preliminary data. Reduced output was due largely to strikes at mines in Missouri and Tennessee. Those two states and New York account for about 85 percent of U.S. production.

Preliminary 1984 reported U.S. consumption of zinc was the highest since 1981, due primarily to increased production of automobiles and major appliances, higher residential construction, and capital investment in industrial plants and equipment.

Imports account for an important share of the total U.S. supply of zinc. Net imports represent about 67 percent of apparent consumption. In 1984, slab zinc imports increased some 3 percent from the 1983 level. Imports of the much less important ores and concentrates rose 36 percent in 1984. Imports of block, pig or slab from Canada increased 11 percent, influenced in part by the strong dollar. Canada supplied 53 percent of 1984 imports, followed by Mexico (9 percent) and Peru and Zaire, each with about 5 percent of the total. Most of the ore and concentrate imports were supplied by Canada, Mexico, and Peru.

Exports of slab zinc from the U.S., while small, increased 78 percent in 1984, while zinc ore and concentrate exports (zinc content) dropped 49 percent.

Construction material accounted for an estimated 45 percent of U.S. zinc consumption in 1984, followed by transportation—25 percent; machinery—11 percent; electrical—9 percent; and other uses—10 percent. Galvanizing accounted for about 45 percent of the total; zinc-based alloys—27 percent; brass and bronze—16 percent; and others—12 percent. Around 200,000 tons of zinc in compounds and dust were consumed, mainly by the chemical, agricultural, rubber, and paint industries.

U.S. industry stocks of slab zinc at the end of 1984 were 16 percent lower than a year earlier. Consumer stocks were off 34 percent and merchant stocks declined 47 percent. However, producer stocks were up 95 percent from a year earlier. As of November 30, 1984, the National Defense Stockpile of zinc contained an inventory of 343,000 tonnes, unchanged from a year earlier and compared with a stockpile goal of 1.293 million tonnes.

World stocks of primary zinc (excluding Eastern Bloc countries) at the end of 1984 amounted to 409,400 tonnes, up from 334,200 tonnes at the end of 1983, according to provisional European Zinc Institute (EZI) data. EZI estimated December 31, 1984 stocks of primary zinc at European smelters at 116,400 tonnes versus 110,300 tonnes on December 31, 1983.

U.S. zinc production in 1985 is estimated by the Bureau of Mines to total about 300,000 tons, assuming strike-free operations and the added production from two new lead-zinc mines being developed in Missouri. Slower economic growth is expected to keep 1985 U.S. consumption at about the same level as in 1984. From a 1981 base, domestic demand for zinc is expected to increase at an average annual rate of about 2.2 percent through 1990. In January 1985, ASARCO, Inc. announced that it was planning to close indefinitely its 104,000 ton a year Corpus Christi, Texas zinc refinery in the second quarter of 1985. This closure would mean that only four primary zinc plants with a total annual capacity of 300,000 tons would be operating in the U.S.

The average monthly U.S. producer price for High Grade zinc in 1984 rose from 49.22 cents per pound in January to the year's high of 52.77 cents in May and then declined to 43.60–43.62 cents in November and December. The London Metal Exchange (LME) cash price (average monthly) dropped from a high of 47.162 cents per pound in March to a low of 37.807 cents in August before recovering to 39.313 cents the following month. The December average price was 38.874 cents per pound.

Futures Market

Zinc futures are traded on the London Metal Exchange (LME). Trading in a High-Grade contract was added in September 1984, to the existing Standard contract.

Salient Statistics of Zinc in the United States In Thousands of Metric[7] Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production of Slab Zinc						Dec. 31 Stocks at			Consumption					
		Primary			Value Mil. $[6]	Redistilled Secondary	Total Production	Producer Plants	Consumer Plants	Gov't. Stockpile	Zinc Slab	Ores[2]	Base Scrap[2]			Total
		Domestic	Foreign	Total									Zinc[3]	Copper	Aluminum[4]	
1974	59	347.0	208.2	555.2	359	78.5	634.0	39.7	211.2	391.6	1,287.7	127.1	87.7	162.5	8.0	1,673
1975[7]	61	279.4	118.0	397.4	366	52.5	449.9	67.7	97.3	349.9	839.4	75.1	177.8	106.3	.5	1,117
1976	59	346.4	106.1	452.6	359	62.2	514.7	88.0	109.9	349.4	1,028.9	91.8	138.4	139.2	.5	1,394
1977	57	322.2	86.2	408.4	309	45.9	454.3	83.8	86.5	347.8	999.5	86.5	139.6	139.6	.6	1,368
1978	66	267.4	139.3	406.7	207	34.8	441.5	37.9	99.3	345.9	1,050.6	90.0	73.2	141.5	.5	1,442
1979	63	255.3	217.1	472.5	220	53.2	525.7	59.1	92.6	345.7	1,000.6	79.7	146.7	166.4	.9	1,394
1980	60	231.9	108.6	340.5	262	29.4	369.9	22.6	69.6	342.4	811.1	59.0	133.0	138.2	1.1	1,142
1981	64	259.8	86.7	346.5	307	50.2	396.8	44.7	81.9	340.6	840.9	60.6	149.3	138.7	.7	1,189
1982	58	193.3	34.9	228.2	257	74.3	302.5	34.2	77.6	340.6	709.5	35.5	93.1	114.3	.7	953.1
1983[1]	65	210.3	25.4	235.7	251	69.4	305.1	23.9	89.0	340.6	805.9	38.3	131.7	144.0	.7	1,121
1984[5]	67						290.0	46.6	58.4		822.2	68.1	115.4	135.3	.7	1,142

[1] Preliminary. [2] Recoverable zinc content. [3] Excludes redistilled slab & zinc produced by remelting. [4] Aluminum & magnesium-base scrap. [5] Estimate. [6] Domestic ores (recoverable content). [7] Data prior to 1975 are in THOUS. OF SHORT TONS. *Source: Bureau of Mines*

T.770

World Smelter Production of Zinc In Thousands of Metric[4] Tons

Year	Australia	Belgium	Canada	France	W. Germany	Italy	Japan	Mexico	Norway	Peru	Poland	Spain	USSR	Un. Kingdom[3]	United States	World Total
1972	325.2	286.3	524.9	288.3	235.5	171.8	887.7	92.4	80.9	74.0	251.3	109.9	717.0	81.4	633.2	5,656
1973	330.1	309.8	587.0	285.9	283.3	200.6	929.2	78.7	89.2	76.8	259.0	118.0	740.0	92.4	583.5	5,877
1974	305.2	318.3	469.9	305.0	441.0	216.5	936.9	150.9	79.8	78.7	257.0	143.3	750.0	93.0	555.2	6,183
1975	213.1	235.0	470.6	164.9	302.4	198.1	769.7	169.7	67.1	69.7	267.9	147.0	760.0	58.9	438.1	5,526
1976[4]	249.2	241.2	472.3	233.3	304.8	191.2	776.0	175.2	64.4	64.7	237.0	161.1	800.0	41.6	514.7	5,675
1977	256.4	258.2	494.9	238.3	354.8	169.4	805.0	174.4	69.8	66.9	228.0	156.6	815.0	81.5	454.3	5,812
1978	294.8	241.5	495.4	231.2	306.8	177.6	792.7	173.1	71.6	62.9	222.0	177.0	850.0	73.6	441.5	5,882
1979	310.4	252.6	580.4	248.6	355.5	202.3	789.4	161.7	77.8	68.2	209.0	182.7	880.0	76.7	525.7	6,260
1980	306.0	247.6	591.6	252.8	370.6	206.4	735.2	143.9	79.4	63.8	217.0	151.8	895.0	86.7	369.9	6,049
1981	300.4	234.7	619.0	257.1	366.6	180.9	670.2	126.5	80.3	126.2	167.1	179.5	905.0	81.7	396.8	6,079
1982[1]	295.9	228.3	512.0	243.8	335.0	158.7	662.4	127.0	78.7	160.7	165.4	187.0	920.0	79.3	302.5	5,865
1983[2]	303.0	262.6	617.0	249.1	356.5	150.0	701.3	179.0	79.0	154.0	170.3	190.0	930.0	87.7	305.1	6,175
1984[2]	290		660					185		158					290.0	6,300
1985																

[1] Preliminary. [2] Estimated. [3] Some secondary metal included. [4] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

T.771

U.S. Mine Production of Recoverable Zinc In Thousands of Metric[3] Tons

Year	Arizona	Colorado	Idaho	Illinois	Missouri	Montana	Pennsylvania	New Mexico	New York	New Jersey	Tennessee	Utah	Virginia	Washington	Wisconsin	Total U.S.
1972	10.1	63.8	38.6	11.4	61.9	—	18.3	12.7	60.7	38.1	101.7	21.9	16.8	6.5	6.9	478.3
1973	8.4	58.3	46.1	5.3	82.4	.1	18.9	12.3	81.4	38.0	64.2	16.8	16.7	6.4	8.7	478.9
1974	9.7	49.5	39.5	4.1	92.0	.1	20.3	13.8	93.1	32.8	85.7	12.6	17.2	6.9	8.7	499.9
1975[3]	7.9	44.0	37.1	N.A.	67.9	.1	19.1	10.0	69.5	28.2	75.6	17.8	13.7	N.A.	N.A.	425.8
1976	8.6	45.9	42.3	N.A.	75.8	.1	20.2	N.A.	66.8	30.6	74.9	20.4	10.2	N.A.	N.A.	439.5
1977	4.0	36.5	28.1	N.A.	74.1	.1	20.7	N.A.	64.3	30.4	82.0	16.1	12.0	5.1	N.A.	407.9
1978	N.A.	22.2	32.4	N.A.	59.0	.1	19.1	N.A.	26.5	28.9	87.9	3.5	11.0	N.A.	N.A.	302.7
1979	N.A.	9.9	29.7	N.A.	61.7	.1	21.4	N.A.	12.1	31.1	85.1	N.A.	11.4	—	N.A.	267.3
1980	N.A.	13.8	27.7	N.A.	62.9	.1	22.6	N.A.	33.6	28.9	111.8	N.A.	12.0	—	N.A.	317.1
1981	.1	N.A.	N.A.	N.A.	52.9	—	24.7	N.A.	36.9	16.2	117.7	1.6	9.7	—	—	312.4
1982	—	N.A.	N.A.	N.A.	63.7	N.A.	24.8	—	52.3	16.8	121.3	—	—	—	—	303.2
1983[1]	—	N.A.	N.A.	N.A.	57.0	—	16.8	—	56.6	16.5	110.0	—	—	—	—	275.3
1984[2]							15.2				117.2					255.2
1985																

[1] Preliminary. [2] Estimated. [3] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

T.772

Consumption of Slab Zinc in the United States, by Industries and Grades In Thousands of Metric[4] Tons

		By Industries							By Grades					
Year	Total	Galvanizers	Brass Products	Zinc-Base Alloy[2]	Rolled Zinc	Zinc Oxide	Light-Metal Alloys	Other	Special High Grade	High Grade	Contin.[6] Galvan. Grade	Contrd.[5] Lead Grade	Prime Western	Remelt
1972	1,418.3	518.2	192.1	579.8	45.2	52.0	—31.0—		684.7	147.1	19.0	129.9	397.2	.7
1973	1,503.9	563.8	197.7	598.7	40.8	61.7	—2.93—		739.4	167.5	37.4	132.1	426.6	.9
1974	1,287.7	523.3	181.6	440.3	39.4	65.4	—37.8—		572.9	153.1	26.3	122.1	412.1	1.2
1975[4]	839.4	341.9	104.6	303.2	24.8	35.4	5.3	24.3	397.5	75.7	12.9	71.8	280.9	.7
1976	1,028.9	392.9	150.8	387.4	27.1	35.4	5.2	30.1	500.1	101.1	21.0	94.8	310.7	1.2
1977	999.5	396.4	128.3	367.1	27.4	38.5	5.6	36.1	492.6	91.0	19.7	101.2	293.7	1.2
1978	1,050.6	454.0	141.5	354.1	24.9	37.2	11.0	27.8	491.3	109.7	21.8	98.4	327.7	1.7
1979	1,000.6	452.8	141.4	314.1	22.0	35.5	12.9	21.9	443.1	108.6	22.5	86.8	336.8	2.8
1980	811.1	379.2	98.8	254.2	21.1	27.0	11.1	19.6	354.3	76.2	18.5	70.3	290.3	1.6
1981	840.9	411.0	113.0	243.4	23.2	25.7	8.2	16.5	361.5	97.6	18.2	80.3	275.3	1.2
1982	709.5	342.0	81.1	197.8	37.2	32.4	8.3	10.7	324.8	84.6	24.5	68.7	204.9	2.0
1983[3]	805.9	373.2	107.9	212.9	56.3	19.4	12.5	6.9	406.7	91.0	62.6	60.8	179.1	5.6
1984[1]	822.2	332.3	119.4	203.2	49.6	22.7	—11.0—							
1985														

[1] Estimated. [2] Die Casters. [3] Preliminary. [4] Data prior to 1975 are in THOUSANDS OF SHORT TONS. [5] Controlled. [6] Continuous. *Source: Bureau of Mines*

T.773

ZINC

Zinc Foreign Trade of the United States   In Metric[4] Tons

	Imported for Consumption							Zinc Ore & Manufactures Exported						
								Blocks, Pigs, Anodes, etc.		Wrought & Alloys				
Year	Ores[1]	Blocks, Pigs, Slabs	Zinc Fume	Waste & Scrap	Dross, & Skimmings	Dust, Powder & Flakes	Total Value Thous. $	Unwrought	Unwrought Alloys	Sheets, Plates & Strips	Angles Bars, Rods, etc.	Waste & Scrap	Dust (Blue Powder)	Zinc Ore & Concentrates
1973	154,174	590,751	17,953	1,544	2,328	4,873	304,871	10,574	14,566	2,480	4,503	6,366	666	
1974	133,733	543,806	18,235	2,418	3,863	9,131	479,357	18,865	19,062	3,487	9,591	10,936	1,152	
1975	428,544	374,922	33,327	1,418	3,158	5,739	399,857	2,730	6,897	1,628	11,466	4,448	603	
1976	155,803	695,131	6,927	1,803	12,445	6,009	546,239	1,593	3,513	2,271	7,727	8,171	774	
1977[4]	109,277	503,621	233	9,188	11,739	6,702	411,414	215	899	2,432	4,677	7,445	928	N.A.
1978	106,315	622,470	60	3,310	7,436	8,978	434,376	723	554	2,262	860	14,986	1,803	10,973
1979	87,499	524,130	28	3,259	4,454	3,586	434,677	279	366	1,824	1,451	28,149	966	20,095
1980	182,370	410,163	25	3,470	4,062	3,928	401,134	302	485	2,103	804	29,542	4,512	54,457
1981	245,710	612,007	184	5,782	7,629	7,993	676,299	323	378	1,500	1,160	30,046	5,003	54,232
1982	66,809	456,233	11	2,653	7,104	5,864	409,896	341	863	995	1,028	16,993	2,066	77,289
1983[3]	63,156	617,679	631	3,900	6,508	6,533	533,398	427	662	957	1,046	20,942	1,914	60,168
1984[3]	86,172	639,228	314	6,259	5,027	7,572		759				29,223	2,933	30,579
1985														

[1] Zinc content. [2] Preliminary. [3] Estimate. [4] Data prior to 1977 are in SHORT TONS. *Source: Bureau of Mines* T.774

U.S. Mine Production of Recoverable Zinc   In Thousands of Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	23.3	21.7	23.8	21.1	23.0	21.9	20.9	25.4	18.7	23.8	22.2	21.7	267.3
1980	28.7	26.8	28.6	27.2	25.9	27.4	24.9	25.5	24.4	28.6	24.3	24.8	317.1
1981	25.5	25.7	28.5	26.3	25.6	23.9	24.2	25.2	28.9	28.7	26.0	23.9	312.4
1982	24.2	24.7	25.3	23.4	25.6	27.0	21.3	27.4	25.7	27.8	25.9	23.3	303.2
1983	25.0	22.9	25.5	22.9	22.3	21.0	20.0	23.9	22.9	23.8	21.9	21.7	275.3
1984[1]	23.2	25.0	26.9	21.8	22.7	19.9	19.2	16.2	15.1	21.5			
1985													

[1] Preliminary. *Source: Bureau of Mines* T.774A

U.S. Consumption of Slab Zinc by Fabricators   In Thousands of Metric Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1979	88.4	89.3	96.9	88.4	94.1	90.3	73.6	84.5	72.4	82.4	76.4	71.4	1,000.6
1980	80.4	80.3	82.8	74.1	61.0	55.5	46.8	58.2	66.7	74.6	72.3	70.5	811.1
1981	74.5	73.6	77.3	74.3	73.6	77.2	64.4	72.4	70.2	66.2	59.8	52.0	834.2
1982	55.1	55.3	60.0	57.8	58.8	65.8	56.3	60.7	61.4	60.8	53.7	50.8	709.5
1983	61.8	59.9	68.8	66.7	64.1	65.7	55.8	64.5	67.2	65.5	70.1	63.7	775.3
1984[1]	69.4	70.2	76.8	72.1	73.1	71.1	62.8	67.8	65.1	69.1			
1985													

[1] Preliminary. *Source: Bureau of Mines* T.774B

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Stocks of Slab Zinc[1] (at Smelter) in the United States, at Beginning of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1973	32.7	31.3	30.4	28.1	24.6	22.2	25.1	27.4	32.3	31.6	29.7	29.3
1974	29.8	25.1	22.9	18.8	17.6	19.1	19.6	18.1	20.3	22.3	30.9	42.9
1975	64.4	86.0	108.0	115.7	116.0	108.6	90.5	73.5	61.0	54.0	60.7	67.4
1976	73.4	74.6	67.5	68.0	67.6	69.3	73.0	64.6	59.1	72.6	82.7	88.8
1977	90.5	84.2	58.9	67.9	78.9	77.3	74.9	64.7	59.7	60.3	65.3	65.8
1978	64.3	62.8	56.9	50.0	40.9	32.5	31.8	27.4	30.1	26.9	32.9	38.4
1979	39.9	38.0	37.5	44.5	46.7	45.1	51.8	58.1	57.5	56.3	66.0	61.5
1980	47.5	34.0	31.9	31.4	36.9	42.8	42.1	35.4	30.1	23.4	20.6	20.6
1981	18.4	18.8	20.9	17.6	17.2	17.9	20.9	22.9	21.5	27.0	34.9	38.1
1982	40.4	45.4	46.1	44.0	39.0	30.8	22.6	16.5	17.6	22.0	23.7	27.1
1983	24.2	24.4	21.4	19.8	21.2	22.4	22.2	15.0	10.6	16.0	17.8	18.4
1984	18.4	15.9	17.4	16.5	22.0	27.9	37.4	43.4	44.4	49.0	40.5	36.1
1985	48.2	48.1	46.0									
1986												

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[1] Figures include zinc produced from foreign ores as well as domestic ores. *Source: American Bureau of Metal Statistics, Inc.* T.777

Smelter Production of Slab Zinc[1] in the United States (Includes GSA Metal) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	61.8	56.1	63.1	60.5	59.6	52.6	55.1	55.3	56.9	57.0	54.6	55.3	687.9
1974	50.4	48.8	52.1	47.7	51.5	48.4	49.2	44.7	46.2	49.9	51.5	49.8	590.2
1975	52.1	45.0	45.1	42.7	34.1	29.7	26.9	28.0	32.2	33.5	35.7	40.9	445.9
1976	45.8	45.3	47.2	46.5	47.5	45.3	45.0	39.9	40.6	46.6	41.2	45.1	536.0
1977	45.6	39.6	43.6	42.9	37.2	31.9	26.8	25.4	26.0	34.2	40.0	40.9	434.1
1978	39.2	33.0	30.4	33.5	35.7	34.5	34.5	37.6	37.3	44.2	42.4	42.6	444.8
1979	45.7	46.1	52.9	51.1	49.9	43.0	44.0	42.0	39.8	46.0	43.4	33.5	537.4
1980	30.5	30.6	34.8	32.1	31.9	28.5	20.8	26.7	28.6	31.0	29.9	33.2	358.6
1981	33.4	31.5	34.5	34.1	32.2	30.8	33.0	33.5	29.4	29.8	29.3	25.3	376.8
1982	26.7	23.8	23.6	21.3	23.7	23.7	20.6	22.4	26.5	27.3	20.6	19.9	280.3
1983	20.0	22.8	25.0	24.7	25.9	24.0	17.6	25.6	25.1	26.5	27.3	24.1	288.5
1984	25.5	24.3	23.9	28.4	27.3	30.1	27.0	26.0	25.4	25.4	25.2	31.2	319.7
1985	30.9	28.5											
1986													

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[1] Smelter & refinery production from domestic & foreign ores. *Source: American Bureau of Metal Statistics, Inc.* T.775

Domestic Shipments of Slab Zinc[1] in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	63.6	62.5	67.0	64.8	65.2	58.3	59.2	59.8	55.6	57.8	59.1	53.7	726.5
1974	50.1	57.7	58.3	60.2	63.1	54.0	56.8	55.6	52.0	52.7	45.1	38.3	643.9
1975	30.8	23.6	23.1	35.2	33.8	37.1	44.9	45.0	44.8	40.4	29.0	34.2	421.7
1976	39.8	44.1	54.3	46.0	47.9	43.6	41.2	48.3	46.1	33.0	31.2	39.0	514.6
1977	44.0	45.9	68.9	33.8	26.2	33.5	29.2	35.6	31.0	33.5	35.0	40.4	457.1
1978	40.7	34.5	36.3	40.3	44.8	42.9	35.1	42.0	34.7	47.3	36.4	37.1	472.2
1979	44.2	47.9	53.5	44.1	47.7	44.5	37.4	35.7	40.3	47.3	33.7	37.9	514.3
1980	44.5	44.2	36.8	32.7	26.4	22.6	21.5	33.4	34.0	37.6	32.7	33.3	399.6
1981	35.6	31.1	32.3	37.4	32.6	30.2	30.0	31.5	30.8	24.3	21.4	22.0	359.2
1982	24.4	18.8	22.9	23.4	28.7	31.9	28.7	28.6	25.4	23.0	18.9	16.5	291.3
1983	22.9	22.6	28.0	26.3	24.4	22.8	17.9	32.8	29.5	21.2	25.5	23.5	297.3
1984	28.0	22.8	24.8	22.9	21.4	20.5	20.9	25.1	20.8	33.8	29.7	19.1	289.9
1985	30.9	30.6											
1986													

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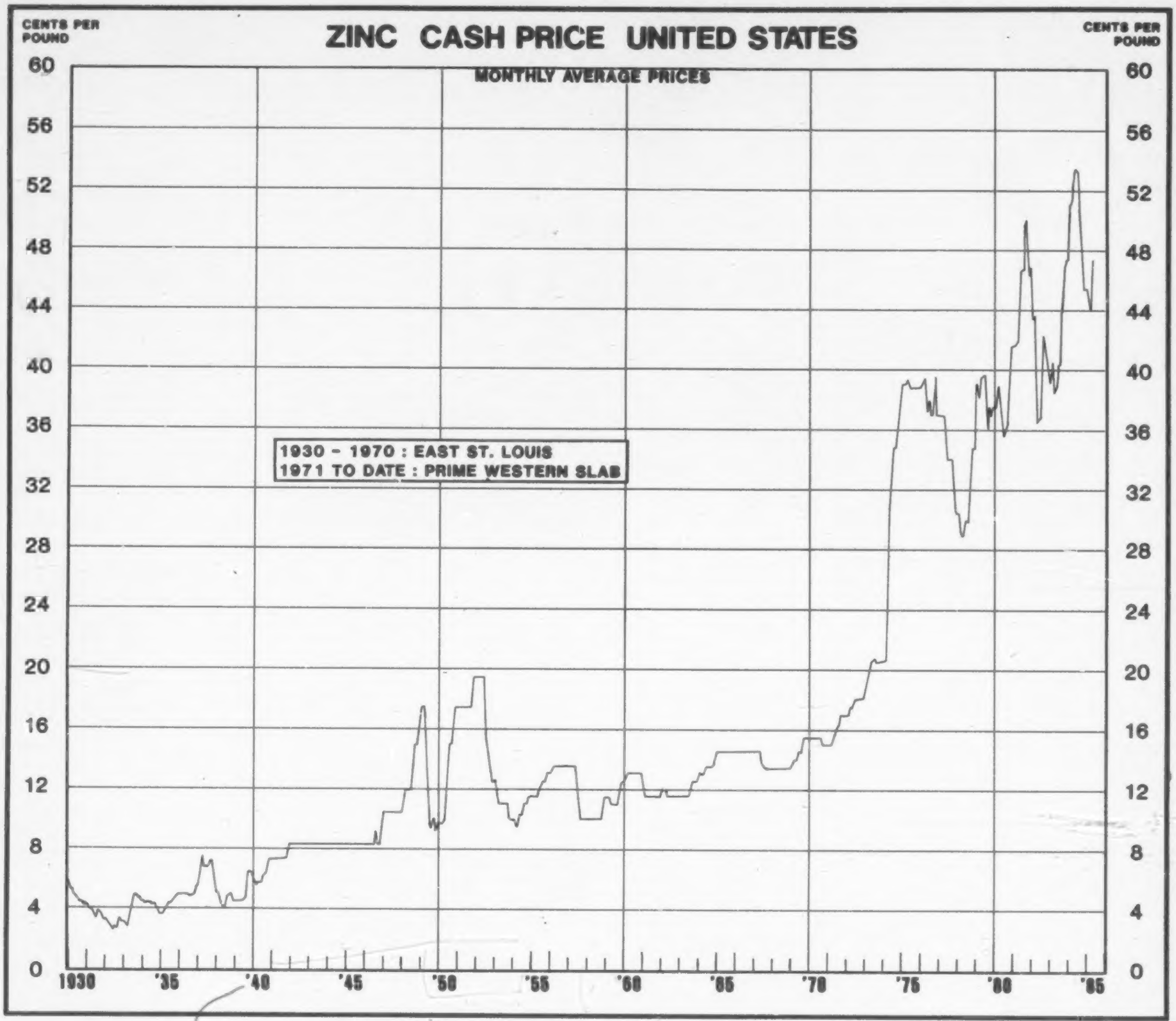
[1] Does not include export shipments & Gov't. account shipments. *Source: American Bureau of Metal Statistics, Inc.* T.776



Average Price of Zinc, Prime Western Slab (Delivered U.S. Basis) In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	18.58	19.25	19.83	20.46	20.63	20.70	20.63	20.63	20.63	20.63	20.63	27.46	20.84
1974	31.18	31.75	32.70	34.75	34.75	35.25	36.97	38.00	38.95	39.00	39.00	39.00	35.94
1975	39.25	39.07	38.75	38.75	38.75	38.75	38.75	38.75	38.75	39.66	38.75	38.75	38.89
1976	37.26	37.00	37.00	37.00	37.00	37.00	37.00	38.75	39.50	37.00	37.00	37.00	37.38
1977	37.00	37.00	37.00	37.00	35.64	34.00	34.00	34.00	34.00	31.74	30.66	30.50	35.21
1978	30.50	30.26	29.00	29.00	29.00	29.95	30.00	31.92	32.75	33.66	34.75	34.75	31.30
1979	35.00	36.90	38.09	39.50	39.50	39.55	39.63	36.82	36.03	37.50	36.88	37.50	37.74
1980	37.50	38.70	38.92	38.50	37.50	36.55	35.50	35.98	37.46	38.48	39.69	41.63	38.03
1981	41.63	41.63	42.13	43.73	46.55	46.63	46.67	49.74	49.88	46.41	46.75	43.65	45.45
1982	43.31	43.56	43.56	36.39	36.64	36.69	38.86	40.00	42.21	42.50	40.80	38.99	39.95
1983	40.20	40.35	38.38	38.73	40.38	40.38	41.51	44.03	46.38	47.09	49.38	49.38	43.02
1984	51.10	51.38	52.84	53.38	53.26	52.61	50.13	48.97	47.16	45.38	45.38	45.38	49.75
1985	44.65	44.01											
1986													

Source: American Metal Market

T.778

(continued from front flap)

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